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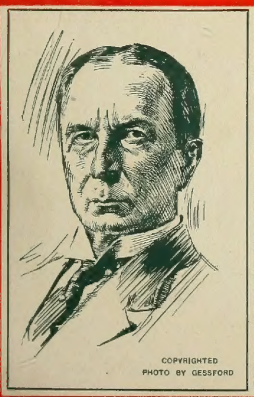

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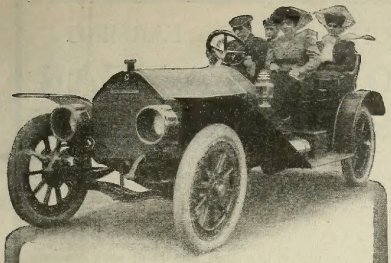

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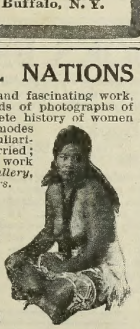

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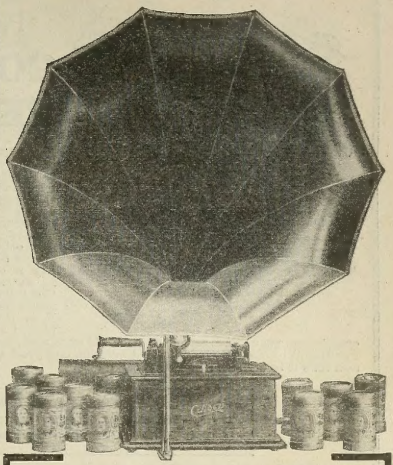

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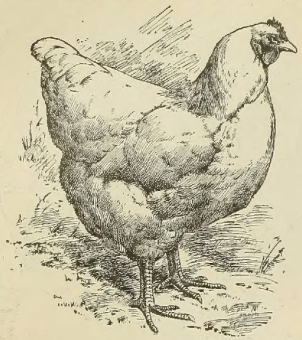

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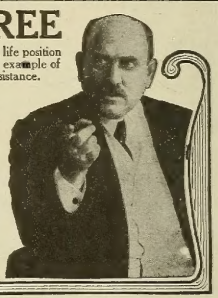

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THE RAILROAD MAN'S MAGAZINE

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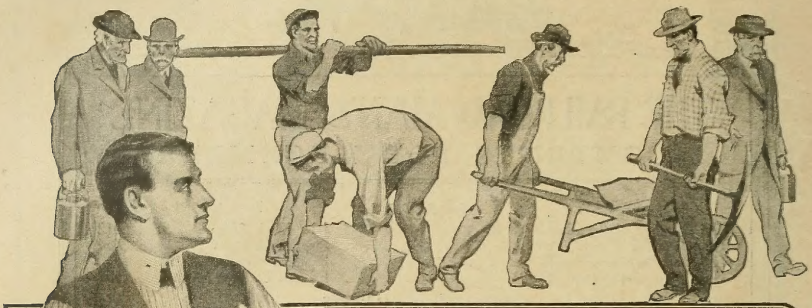

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THE RAILROAD MAN'S MAGAZINE

Vol. X. DECEMBER, 1909. No. 3.

Told Before "Hitting the Hay."

BY OLIN CRAWFORD.

IT'S a rough day that doesn't have a story, and a tired man who isn't ready to hear or tell one. "Ear-pounding" is a pleasant occupation, but it needs a good frame of mind to get the best out of it. Therefore, where two or three railroad men are gathered together in one bunk-house, the strain of the day's toil is relieved by that oldest and most honorable of all barters, swapping yarns—"stove-piping," to use the term that every railroad man understands.

These bunk-house tales bear this stamp—the hall-mark of the road. A nerve-racking incident is laughed over, and, through sheer relief, men who were almost flagged by the black flag of Death tell a tale with as much gusto as the head shack when he romances about the hoboes he made hit the dirt.

Here We Have the Inevitable Black Cat, the Empty Air-Brakes, the Dago Ghosts, the Man with the Hawk Eyes, the Vision of Snyder, and Others.

"DON'T suppose any of you boys remember Nick Ferguson?" said Jim Ronney, as he sat with his feet on the empty checker-board table in the Erie's bunk-house in the Jersey City yards. Ronney quit running a freight-engine when he fell heir to a little property a few years ago, and he hasn't had much to do since but to talk about the old days.

He shot an inquiring glance at the circle of men from the engines — men whose eyes seemed preternaturally large and bright in their wreaths of dust and soot as they lounged around the tables in the big, dark room on the ground floor in the shadow of the roundhouse walls.

"I guess not," said Ronney, noting the general shaking of heads. "He hasn't been on the road since the Civil War, and I haven't seen or heard of him in forty years.

"The first work I ever did was firing on his engine, and of all the superstitious old boys I ever fell in with, he certainly held the record. That black cat that sneaked through here just now put me in mind of him. You know people have got different theories about

black cats; some of 'em think they're good luck, and some think they're bad.

"Ferguson was dead set against 'em. He couldn't abide the sight of one, and I can swear he used to actually turn pale whenever one of 'em came near him.

"It was about 1863, as near as I can recollect, that we were starting out on our run one morning, and he was looking pretty gloomy and not saying much. Finally I said: 'Nick, what's the matter with you this morning?'

"He didn't give so much as a word in answer, but kept looking out of the cab and watching the track ahead; and I made up my mind that if he was going to act that way, I wouldn't bother with him, and kept quiet.

"But after about five minutes he turned and looked at me as solemn as an owl. Then he says: 'Jim, something's going to happen to us before we get back.'

"'What's the matter this time?' I says. I wasn't worrying much, for he'd made that prediction before without its coming true.

"'Well,' he says, 'one of those black devils came and sat on the porch of my house, up in Elmira, last evening, and yowled there all night. That means death. A cousin of mine, in Port Jervis, had a black cat come to his house and act the same way a year ago, and the next day he dropped dead of apoplexy. You may laugh, but I tell you there's something in that superstition.'

Didn't Believe in Black Cats.

"Of course, I didn't take any stock in such a fool idea as that, and after we'd run along for an hour or so, it was pretty near out of my mind, except that Nick brought it back to me now and then by his worried look.

"We were to the west of Shohola, pulling half a dozen freight-cars and making pretty good time, when we came to a switch. As it turned out later, the switchman was drunk. What did we do but run out onto the siding, with a lone caboose standing right ahead of us, not a hundred feet away.

"I lit out for the open air without another look, and landed, sprawling, in a sand-pile without so much as a scratch. I had no more than struck the ground than I saw Nick coming, too. But as he jumped, his foot caught on the cab and tilted him forward, and he turned a complete somersault in the air and landed on his feet. It was as pretty a stunt as I ever saw in a circus.

"He'd waited just long enough to shut off steam, but the engine banged into that caboose and tore it all to pieces, besides getting pretty well smashed up itself. The two brakemen had jumped too, and neither of 'em was much hurt, but it was as close a call as any of us had ever had.

"'Nick,' I says, 'the next time any black cats come yowling round your house, you kill 'em. I don't want any more experiences like this.'

"'Didn't I tell you?' he says.

"'Yes,' I says; 'you told me it meant death. But I never heard a black cat meant any such circus stunt as you've been performing.'

"'Don't be too sure,' he says. 'I'm getting along in years. I may have hurt myself internally doing that somersault.'

"You never can cure a man who was as superstitious as he was."

Running into Danger.

"I've known men whose premonitions did come true, and they weren't superstitious, either," said Harvey Springstead, who had just come in from Mogul 970, and whose days as an Erie engineer date back to 1870.

"When it comes really down to the supernatural, the story about Amos Beattie is the strangest I ever heard. He was running along with a passenger-train at high speed, near the top of the Oxford grade, when the words came into his mind, 'There's danger ahead.'

"He was behind time, and if he slowed down without good reason it might mean trouble for him at the end of the run. But he couldn't get the idea out of his head that he was running into danger, and just before he came to a curve where the woods were thick, and he couldn't see ahead, he shut off steam and put on the air.

"Everybody wondered why he did it, for they hadn't seen any sign of trouble.

But he had no sooner come to a stop than there on the curve, only a few feet away, was a caboose — the rear end of a blocked train. If it hadn't been for that mysterious warning, Beattie would have smashed into it and nobody knows how many lives would have been lost.

"It was on the Oxford grade, too, that Ed Reed's freight-train ran away with him a few years ago. Up at the top of the mountain, Reed had left his brake-valve handle switched around 'on the lap,' and gradually all the air had leaked out of the tanks.

"Coming down the grade, there's a fall of almost ninety feet to the mile. You can imagine that when he struck it he began to get up speed with fifty or sixty heavy freight-cars behind him. He was running altogether too fast for safety, so he grabbed his brake-valve and found it wasn't working.

"That scared him, and he switched it around to emergency. Still nothing doing; not air enough to make a sound. And the old train was getting up more and more speed every second.

"HE USED TO ACTUALLY TURN PALE WHENEVER ONE OF 'EM CAME NEAR HIM."

"They used to say Reed's hair stood right up on end when he found his air had gone. He began to scramble back toward the cars, and the brakemen, when they realized what was up, tried to put on the hand-brakes. But they wouldn't hold somehow, and away the train went at a tremendous clip, with pretty near two miles of down grade ahead of it, and with only about one chance in a hundred of holding to the rails.

"I don't suppose anybody ever had any notion of what speed it reached, but it was a good guess that it was the fastest freight that ever ran on the road. Talk about your eighteen-hours-to-Chicago trains! They wouldn't have been in it for a minute with Ed Reed's fast freight.

"It came down the mountain like a streak of lightning, with Ed hanging on to his cab and wondering how soon he was going to another world. The train-crew was yellin' and thinkin' they were never going to see home again, and then, a minute later, ahead of 'em, on the same track, they got sight of another freight.

A Quick-Witted Despatcher.

"It looked as if it was all up with 'em then. The other freight was under way, and was going the same direction they were, but it was down at the bottom of the grade; and even if its engineer had seen them coming, he never could have worked up enough speed to run away from them. But as it happened, he hadn't any idea that there was such a flier behind him, and he was just crawling along.

"Just then, in the nick of time, the

despatcher at Chester saw Reed coming. He knew he wouldn't be driving along at that speed unless something was wrong, and he made up his mind what to do in a flash.

"It happened that there wasn't anything on the east-bound track just then, and he swung the switch to turn Reed's train over onto it.

"A few seconds later the runaway came pounding along to the cross-overs. It was pretty doubtful whether it would hold the rails between tracks going at such a speed and with so many cars, but it did somehow, and brought up on the east-bound track safe and sound. But it ran along beyond that point almost a mile on the up grade before Reed could stop it.

"If it had been a little later, there would have been a chance of a head-on collision, for an east-bound train was soon due. It's a pretty safe guess that Reed never kept his brake-valve open after that.

"But to come back to those superstitious people, did you ever hear why Jim Farrington once quit his job? About fifteen years ago, twelve Italians were killed in a wreck at Hohokus.

The Hohokus Ghosts.

"Farrington was baggage-master on my train then, and he was inclined to be superstitious. Some of us had heard he believed in ghosts, so we fixed up a job to test him. The night after the wreck, when we came to the place where it had happened, I slowed down a little bit, and then one of the brakemen let out a yell. The next minute Farrington was running around, wanting to know what all the trouble was about.

"'The trouble!' said somebody. 'Isn't there trouble enough when you see the ghosts of twelve Italians all waving at you at once?'

"Farrington quit running on that line after that night. He said twelve dago ghosts all in a bunch were too much for the nerves of any man."

A little later, Levi Linley came into the bunk-house. He has been running an engine on the Erie for forty-one years, and was a brakeman as long ago as 1861.

"Ever see a ghost, Levi?" asked a young fireman.

"I can't say that I have," said Linley as he poured his coffee into the inverted cover of his dinner-pail. "My engine has struck a good many men, but they don't haunt me nights. The only one that ever came anywhere near it was a man I ran over up the other side of Chester, nine or ten years ago.

"I was just running out of the station, and going not more than six or eight miles an hour, when I noticed him walking alongside the track. He was a man about thirty-five, I should say, and looked pretty seedy. He and the engine were going in the same direction, and I didn't pay much attention to him until he stopped of a sudden, turned his head, and looked me straight in the eye.

Eyes of a Hawk.

"He had an eye as sharp as a hawk's, and, somehow, that look of his seemed to go clear through me. I never want to see as much in another man's eyes as I saw in his that moment. I've heard of magnetic eyes and soulful eyes and eyes that spoke volumes, but the eyes that man turned on me nobody would ever forget. They sent a creepy feeling right up and down my spine.

"The next second, what did he do but kneel down on the track, stretch his hands out in front of him, and put his head across the rail.

"I looked the other way. I've seen dozens of men killed, but I couldn't stand that, not after those eyes had bored through me. And I couldn't go back to see what was left of him, either. The only man I ever struck that I didn't go back to see afterward.

"I can see those eyes now, and sometimes I see 'em nights, too. If I ever have a nightmare, I'll be dreaming that man is standing by the track, looking at me.

"It turned out that he had been to Greycourt the evening before, had spent his last twenty-five cents there for something to eat, and had gone away saying he was down and out.

"It's lucky I don't believe in ghosts, or I might imagine I saw him in front of the engine some night. This ghost talk is

all bosh; but in the half century that I've been on the railroad, I've run with a good many men that believed in 'em.

"Twenty years or so ago, a brakeman named Snyder was killed at White's Bridge, near Otisville. The next night when we were running by there, the men on my train were pretty near scared to death. They imagined they saw Snyder sitting on the wall at the end of the bridge, waving his hand at them.

"A few nights later, at the same place, the brakemen got another scare. There was Snyder on the wall again, they said, beckoning to them. One of them gave a yell you could have heard a mile away.

"But I hadn't seen anything myself, and I never did, though for months afterward the brakemen running by there used to think they saw the ghost sitting on the wall.

"About the worst scare I ever had didn't come from ghosts. It was one day in the early sixties, while we were running near the Delaware Bridge. It was a cattle-train. In one car there were twenty-five oxen. We were going along at a pretty good clip when the engine jumped the track, dragging the nearest cars into the ditch.

"Alongside the ditch there was a stone wall about eight feet high. I was a brakeman in those days, and was riding in the caboose. When the smash came I was pitched clear over that wall, and landed on my hands and knees without much more than a scratch.

"AN OX CAME THROUGH THE AIR, ABOVE THE WALL."

"I had no sooner struck the ground than an ox came diving through the air above the wall, looking something like the pictures of the cow that jumped over the moon, and landing on all fours almost on top of me. It had been thrown right through the roof of one of the cars, and why it wasn't killed, or at least hurt, I never could understand."

Sometimes M. M. Rounds, one of the oldest railroad men in the country, strolls down to the Erie yards from his home in Jersey City. He goes back to the dim, old days of the strap-iron rails,

"WONDERING HOW SOON HE WAS GOING TO ANOTHER WORLD."

when the telegraph played only a very small part in railroading. Two years ago the Erie retired him on a pension, after he had served the company twenty-nine years as an engineer.

Rounds was born on March 21, 1825, and it was in 1847 that he became a railroad man. In that year he went to work in the Boston Locomotive Works, and helped to build some of the famous engines of the time. In 1849 he went to the Boston and Providence as a car-repairer, and in 1850 became an engineer on the Hartford, Providence and Fishkill, with a run between Willimantic and Bristol.

In 1851 he became an engineer on the New York, New Haven and Hartford. Three years later he was in charge of the engine repair-shops at New Haven. In 1870 he was running an engine on the Erie. In 1872 he was in Maryland as one of the contractors who were building the Southern Maryland road.

After thirty miles had been built the road's backers ran short of funds, and, in 1874, Rounds became an engineer on the Missouri Pacific. Three years more, and he was back running an engine on the Erie again. Many a story this old engineer tells of railroading in the fifties. He was on one of the engines that ran through the famous blizzard of 1856, one of the worst snow-storms that ever struck New England.

"Railroading through the storm of 1888 was bad enough," he said, "but it was a good deal worse in '56, when the snow was just as deep and the engines smaller. I was in charge of the

engine repair-shops then, and in the height of the storm I ran out from New Haven with one of the engineers.

"There wasn't any telegraph system then worth mentioning, and the road was only a single track. The train that was due to meet us didn't come, so we ran on past the switch, intending to go as far as we could, until we met either that train or some other one. The engineer was worrying. He wasn't sure just what he ought to do.

"The only rules to guide an engineer at that time were printed on the backs of the time-tables, and they didn't provide for many emergencies. It was risky business, too, running on a single track and not knowing where the other trains were. But, of course, we didn't run very fast. Even under the best of conditions, a train didn't often average more than twenty miles an hour in those days.

"At last we met not only one train, but six, all together. The engineer of the first train insisted that we must run back and get out of his way. But another train had run up behind us, and the engineer of that shouted out: 'I won't back a foot! Not for the president of the road.'

"Well, they began to argue, and were getting pretty mad about it, when the superintendent of the road, who had been on one of the six trains ahead of us, came running up, and cried out that we had the right of way because we were on time and the trains ahead of us weren't.

In the Single-Track Days.

"So all those six trains had to run back and let us move on. Of course, it took them a good deal longer than it would have taken us, and we would probably have got ahead faster if we had run back to a switch and let them pass us, but it was a matter of pride which should get out of the way. The question of which way would delay the passengers the most didn't enter into the question.

"I've known engineers to meet on that old single track and stop head-on only a few feet apart and begin arguing over which one's watch was right.

"One of 'em would call out: 'Now look a here, my watch hasn't lost ten minutes in a week, and I set it by the town clock only this morning. I'm here right on time, and, by thunder! you've got to back out.'

"Then the other one would begin to tell about how his watch was guaranteed, and they'd keep on arguing until one or the other would get tired and get out of the way.

Correct Time Not Kept.

"Nobody had perfect time in those days, and one of the rules of the road was that we should wait at a station five minutes to allow for differences between watches.

"Queer how there weren't more accidents, isn't it? But they didn't have half as many big disasters as we have nowadays. I suppose the worst that New England ever had in those early years was the one at the South Norwalk drawbridge. When the draw was closed, a red ball hung over the bridge. If the ball wasn't in sight, it meant that the draw was open.

"But one day, in 1853, an engineer at the head of a big passenger-train ran out into the open draw at full speed when the ball was down. The engine and three cars went into the river, and the only reason the rest didn't follow was that there wasn't room left in the draw for them to squeeze through. Forty persons were drowned in that accident, and a good many of them were from some of the best families in New England.

"Nobody could understand why the engineer had run out onto the bridge when the ball was down, and he didn't live to explain. Many times after that I ran a train over the same bridge myself, and I used to wonder what it was that could have led to such a foolish blunder.

"And, at last, one day I solved the mystery—solved it to my own satisfaction, at least, and other people on the road agreed with me. Just in line with the red ball, I caught sight of the top of a red chimney a few yards back from the end of the bridge. With the sun in a man's eyes, he could easily have taken that chimney-top for the ball itself. I

"THEY SAW SNYDER SITTING ON THE WALL AT THE END OF THE BRIDGE, WAVING HIS HAND."

haven't the least doubt that that chimney was responsible for that wreck."

When it comes to queer accidents, there is the adventure of Clark Caskey, who runs the Erie's Engine No. 940. Caskey is one of the very old-timers, too. Way back in 1861 he was a brakeman on the Erie, and throughout most of the Civil War he was running an engine on the Atlantic and Great Western. In 1865 he came back to the Erie, and has been an engineer on that road ever since.

What Clark Caskey Told.

"It was in the early sixties," said Caskey, "that I was running a little west of Meadville, Pennsylvania, pulling a train of oil-cars. They didn't have oil-cars then such as we have to-day. The oil was carried in big wooden tubs. We were running toward a switch, which, for some reason or other, and unknown to me or the crew, had been left open.

"That sent us flying onto the side-track, where a freight-car was standing. It was too late to prevent a smash, and we went crashing into it. The fireman and I and most of the crew jumped just in time, and landed, unhurt, on the other side of the ditch.

"The collision knocked one of the tubs open in the car behind the engine, and sent a stream of oil right out over the boiler. In another second the engine and the whole train was ablaze from end to end.

"We had no more than seen the fire flash along the cars than there ran past us up the slope a human torch—a man who was ablaze from head to foot, and who left a trail of fire behind him in the wind as he ran.

"He was Fred Hill, the head brakeman. I hope I shall never see another sight such as that.

"He ran as fast as he could through the open fields, until he came to a mud-hole. He dove into it, and rolled around in the mud till the fire was out. He lay there until we came up and dragged him to his feet.

"It seemed for a time as if he would recover, but he had inhaled the flames, and didn't live but a day or two."

Often, among the old-timers, tales are told of engineers who have long been in their graves, engineers whose names were known to thousands of railroad men in their day, and whose memories are still kept green.

Such a man was Charlie Leonard. A good many men still living used to be his friends. One of them is Tom Shaw, the brakeman on the Greenwood Lake Division, who used to run on the same train with him. Tom Shaw was a brakeman back in Civil War days, and when

he was twelve years old he was running messages for J. E. Dunning, the head operator on the Erie's Eastern Division.

"Leonard was the man who hung onto his tank with a broken leg all the way down Shonkum Mountain," said Shaw. "A side rod on his engine broke and knocked a hole through the floor of his cab. It broke his leg and knocked him back against the tank.

"Then it went thrashing around through the cab so that he couldn't have come back to it if he had been able. He saved himself from going clear out to the ground by grabbing the edge of the tank, and there he hung for five miles, till the brakeman discovered him.

"On the old twenty-one passenger, Leonard had a brakeman named Frank Fox, and a man named Russell was conductor. Fox dreamed one night that he saw himself lying beside the track, dead. Russell had been a watchmaker, and it happened that Fox had a watch that belonged to him.

"The morning after his dream he told his mother that if anything happened to him she should send the watch to Russell. He told her he was afraid he wasn't going to come back alive.

"In the evening, Fox came to the train for the night run. Part of the way he rode in the baggage-car. There was no light there, and both side-doors were open. Fox was riding there all alone when he pitched out of one of the side-doors and went under the wheels.

"Leonard was a man who used to have queer dreams, too. One night he told the boys that he had dreamed he had heard his friend, Red Rickey, the flagman, crying: 'Good-by, Charlie. You've done for me!'

"That dream seemed to have scared him, for he was nervous when he started out on the night run, and kept saying he was afraid something would happen.

"Well, something did happen. It was up beyond Turner, and they were not very far from where Rickey lived, that Leonard noticed a man walking the ties ahead of him. It was midwinter. Snow was falling; the track was slippery.

"Leonard blew his whistle, and the man turned his head, looked at the engine, and waited until it was almost on top of him before starting to get off the track. Then, as he was stepping over the rail, he slipped and went sprawling. The next second the engine was over him.

"When the train had come to a stop, Leonard got out and walked back with the rest to look at the man he had killed. When he got to the spot, the body was lying in the snow by the side of the track, and somebody was holding a lantern so that the light fell full in the man's face.

"Leonard gave one look, and turned away with a hoarse shout. It was Red Rickey he had killed.

"That was the only time anybody ever saw Charlie Leonard scared. He was as white as snow all the rest of the night, and his hands were shaking so that he could hardly pull the lever.

"The way Harry Dexter met his death always seemed queer to me, too. He was running on the Greenwood Lake Division at the time, and the following day he was to be transferred to the main line. He came down the meadows to the Snake Hill draw-bridge, and the day was clear as a bell, and all the signals were set ahead of him to show the draw was open.

"But he kept right on at full speed, and toppled into the river. There were five other men on the engine with him, and they all jumped into the water and swam ashore. Dexter jumped, too, but the heel of his shoe caught on one of the ties, and he fell forward and broke his skull against the trestle.

"It was a passenger-train he had been pulling, and there were fifteen passengers aboard when the cars all went piling into the water. For some unknown reason, the stay chains hadn't been fastened to hold the cars on the trucks. If they had been, the heavy trucks would have dragged them to the bottom. As it was, the cars floated, and the passengers were all saved. The only one killed in the wreck was Dexter himself.

"Now, why was it that an experienced engineer like him could run at full speed into an open draw when all the signals were set, and the day was bright and clear? The men who were in the engine with him never could explain it. They said that Dexter, at the time, had been looking straight at the signals, too."

The Dynamite Division.

BY DENNIS H. STOVALL.

Some of the Unusual as Well as Unfortunate Things that Have Come to Pass While Hauling the High Explosive in the Far West.

RUNNING through northern California and southern Oregon is a section of the Southern Pacific main line that railroaders have appropriately dubbed the "dynamite division." Possibly no other section of railroad in America has known more accidents than this portion of the Southern Pacific. And it should be clearly understood that there is not one lone anarchist on the entire "dynamite division."

This part of the Southern Pacific snakes over the great Siskiyou range, on the Oregon-California line, and the Coast Mountains of southern Oregon. A vast amount of dynamite is used in the mines of the district, and a still greater amount is hauled over the line to more northern points for excavating purposes. Nearly every freight-train has one or more dynamite-cars in its string, and some trains are loaded almost entirely with the explosive.

To reduce the danger of handling and moving it to the lowest possible minimum, nitroglycerin, which supplies the explosive quality of dynamite, is mixed with infusorial earth. The silicious earth simply absorbs and holds the liquid, and also diminishes its sensitiveness. Besides absorbing it and reducing its sensitiveness, the earth also allows the dynamite to be manufactured into convenient sticks.

These sticks are the size and shape of ordinary candles, and are packed in twenty-five and fifty-pound boxes. In shipping, these boxes are piled one upon the other in ordinary freight-cars.

Where the cars are completely filled the danger of explosion is less than when the cars are only partially filled. A long freight-train, with three cars of dynamite in its middle, was speeding down the grade through Cow Creek Cañon in the Coast Mountains. Nearing a tunnel, the engineer applied the air. The train slowed suddenly. One of the dynamite-cars was only half filled, and the sudden checking slid the boxes forward.

A Real Explosion.

They came up hard against the end wall. The dynamite in all three cars exploded simultaneously. The shock that followed was terrific. Towns thirty miles away trembled as if by an earthquake.

The two big locomotives drawing the train were shot through the tunnel like a stone from a catapult. Except a few near the tail, all of the cars were reduced to atoms and the particles hurled for miles. Every vestige of the cars containing the dynamite completely disappeared. Fortunately, the crew was at each end of the train and escaped with bruises only.

The main force of this explosion was upward. The cañon walls were stripped of trees and brush. At the top of the precipice overlooking the cañon, and a mile from the railroad, a hammock was swung between two trees. A woman lay in the hammock, idly reading. When the explosion occurred she was hurled into the air and dropped, unhurt, among the vines and dense growth near by.

A few months later another freight-train, with two cars of dynamite in its string, met a similar fate at almost the same point in Cow Creek Cañon. One of the cars was derailed, and it was the jolting over the ties that shook the dynamite and caused the explosion. This train was a worse wreck. Two brakemen who were "on deck" were killed.

There were several cars of lemons on this train, and railroaders solemnly affirm that it rained lemons for a week following the explosion. Up on top the mountain, above the cañon, a prospector had built his cabin. He was frying flapjacks when the explosion occurred, and was surprised when a fifty-pound section of steel car-plate came down his chimney.

As a protection against careless loafers, each car containing dynamite is posted with big placards. These convey the information that the car contains a dangerous explosive, and warns loafers against passing the time in its vicinity; but the big, black-lettered warning is now and then overlooked by the careless on the "dynamite division."

In one notable instance, two cars so placarded were used as a target by three small boys, who were anxious to test the shooting qualities of a newly purchased rifle. They were shooting at the letter "S" on the car. The boy who tried first missed by a narrow margin; the next boy came a little closer, and the third boy hit it in the center—at least, it is presumed he did from what followed.

The two cars of dynamite exploded, and not only the three boys but a half dozen bystanders were killed, not enough of their bodies being found to make one burial. The little California town was almost wiped off the map, and traffic demoralized for two precious days.

In the several accidents that have occurred the freakish nature of the explosive has been clearly exemplified. Dynamite will not ignite or explode from a blaze. Some miners have a playful habit of lighting sticks of the powder "just to see it burn." If all conditions are favorable, it will burn quietly with a blue flame and a slight sputter.

It is supposed to explode only when subjected to a severe shock, and in using it this shock is produced by a percussion-cap containing fulminating mercury. But there have been instances in hauling the explosive over the "dynamite division" when it failed to explode after getting a pretty severe jolt.

Near Grant's Pass, Oregon, the northbound Overland, running at high speed, crashed into the rear end of a freight that had failed to take the siding. The two locomotives drawing the passenger plowed through the caboose and into three cars of dynamite. Not only the cars containing it, but the boxes of explosive were broken to bits. The sticks were bruised and mashed flat; some were thrown hundreds of feet. Yet no explosion occurred.

The best "powder experts" fail to explain why the dynamite did not ignite. Two hundred people on the Overland and three thousand persons in Grant's Pass were sincerely glad it did not.

Considering the vast amount of dangerous explosives hauled over the "dynamite division," the Southern Pacific does well to transport the stuff with as few accidents as do occur.

MY SWEETHEART'S AN ENGINEER.

BY KITTIE SPARGUR HULSE.

A Song, Written for "The Railroad Man's Magazine."

YOU may sing, if you like, of the boys in blue,
In a song that will move to tears;
I sing of those heroes so brave and true—
God bless them! Our Engineers!
And I love to ride down the shining line,
In the smoky old cab so dear,
While the red flames roar through the furnace-door,
With my sweetheart, the Engineer!

REFRAIN:—My sweetheart's an engineer,
And it's proud I am of him;
And there's never a pleasure I hold so dear,
As a ride in the cab with Jim.

His face may be grimy; his soul is white;
His honest gray eyes are clear;
My Jim's all right, in one girl's sight,
Though he's only an engineer.
And if ever he's needed, you'll find him there,
Although it may cost him dear;
He'll wait by the lever and stand by the air—
My sweetheart, the Engineer!

HE OMITTED THE "EXTRA."

BY JAMES NORMAN SHREVE.

What Happened When Pusher 292, With Redding at the Throttle, Thought She Had the Right of Way.

THE timekeeper struggled feverishly for several moments to catch at least a few of the letters that were sprayed out in what seemed to him a hysterical blur of dots and dashes from the white, deft fingers of Alfred Winter, second-trick despatcher of the Pecos Valley Lines.

Finally a breath of the cool June night breeze from the open window behind him doubled over the sheet of clip he was writing on, and he lost track of the meanings. He shook his head, threw down his pencil, and leaned back, watching admiringly the swift work of the despatcher.

In a moment the latter closed his key, looked up at the clock, and jotted down "10.20 P." on the train-sheet. Then he smiled thinly at the timekeeper.

"Get any?"

The timekeeper grinned sheepishly. "Oh, some. I got 'C. & E.' all right, and an 'assist' and 'extra' and—let's see—'over all' and 'trains.' Gee! You must have gone at a sixty-a-minute hike."

A STALWART, BLACK-CAPPED FIGURE, TORCH IN HAND.

"Hardly that. About forty-five. Farquehar, at Canadian, isn't a fast man. Here he comes with the repeat. Try it. He sends slow."

The timekeeper grabbed his pencil and again bent over his pad. When the despatcher handed the train-order copy-book over the long glass partition to Korby Browning, his young night operator, the timekeeper walked around and peered over Korby's shoulder. For a moment he compared his slip with the book. Then he slapped his leg explosively.

"By gracious!" His voice was triumphant. "Look-a here!"

He shoved the paper under Korby's nose.

"What do you think of that now! Say, only whisper to me, friends—only whisper. I see your finish, Korby. Me for your job, all right, all right. Say the word, Alfred, and you can have me."

The despatcher threw his thin, ungenial smile at the operator. "Get it, did he?"

Korby nodded. "Sure thing. All except the date." He got up and offered his chair to the timekeeper. "Here you are,

Shervin. I resign. You're it. When you get Alfred's job, there, gimme mine back, will you?" He reached for his pipe. "Got a match?"

Shervin carefully folded his sheet of paper. "This is a precious thing. In future years I shall look upon its frayed and worn edges and say to one K. Browning, still a struggling operator tolerated in my office, 'Young man, remember that? Why, oh, why haven't you taken a leaf out of my book?'"

He handed over the match. "Well, I gotta go to bed. 'Night, both. Bet you I dream of head-end collisions; No. 202 in the ditch; forty people passed in their checks—and me asleep at the key!"

The night operator at Canadian sat for a moment staring at the train-order pad before him, a shaggy frown roofing his tired, pleasant eyes.

"Humph! Funny business, that. '*All* trains,' hey? Oh, all right, all right. Reckon they know what. But all the same—" He tore off the top sheet and limped to the door.

Pusher 292 stood on the passing track, breathing deeply and evenly, as if gathering strength for the stiff climb up Glazier Hill behind the thirty-seven loads of Extra 18 that waited on the main line ahead, just beyond the switch. A stalwart, black-capped figure, torch in hand, overalled, and jacketed in grease-smeared faded blue, was leisurely oiling round, now stooping a little to peer back of the big drive-wheels, now reaching over with long-spouted oil-can to satisfy some thirsty cup.

"Hi, Redding! You Belvedere, you! Come here and get your orders!"

The black-cap faced about and the flaring torch showed clear eyes set in clean-looking whites, cheeks that, even in the yellow, smoky light, were pink as a girl's—what you could see of the natural color—and strong white teeth in an amiable grin at the operator's pet classical allusion when speaking to this particular black-cap.

Frank Redding knew nothing of Apollo, or Hercules, or Mercury, or Venus, except, perhaps, as euphonistic titles to sundry Pullman sleepers that he aspired to whip around curves behind him.

If he had had even a faint knowledge, can't I see him blush, and jump for his cab, and swear fluently from the safe retreat of his cushion, where the spluttering hiss of dripping water-cocks and the subdued roar of fire-box would drown all answering retorts to the operator?

At the door he caught the little lame man by the elbows, carried him over to the desk, and plumped him gently down into the rickety armchair.

"You stop your 'Belvy-dearing me, or I'll tell your wife you're thinking of some other girl."

It was an old threat that always brought a chuckle from Farquehar—a chuckle a trifle puzzling to the young engineer, indicative somehow of amusement at his expense.

"Gimme that order." He bent down close to the dingy station-lamp. In a moment he had straightened up and looked quickly at the operator. "Sam Hill! Why, this says—say, you sure you got this right?"

"Sure thing. A. W., O. K.'d my repeat."

Redding studied the sheet a full minute longer.

"Humph! We're the moguls tonight. I suppose if the old man himself was out in a special we'd be over him, too—what?"

An impatient screech from far up the track made him thrust the order into an inside pocket.

"Well, see you later. Friend Josiah's saying 'What the deuce!'"

He ran out to his engine and swung up the steps. A clang or two of the bell, a quick snort of the whistle, a few soft expulsions of the exhaust, and 292 moved slowly up the siding, out across the switch, and coupled neatly onto the rear end of Extra 18.

One hour later Redding whistled "good-by." He and his fireman watched the caboose fade out of the headlight's ken, and the green eyes of the rear lanterns grow smaller and nearer together and suddenly blot out altogether as the train swept around a curve.

Redding pulled back the reverse, but before opening the throttle once more referred to the thin waxy sheet of the train-order.

"Can't make anything else out of it. Can you, Carl?" He handed it over

to the fireman, at the same time gently pulling at the throttle. As the steam dropped hissing into the cylinders and the drivers grumbled into sullen, clanking motion, the fireman shook his head and passed the paper back.

"Nope. We're the folks tonight."

"All right. Here goes."

He glanced out along the track, slipping sluggishly under them through the thick yellow light from the rear of the tender, braced himself comfortably against the window-jamb, and with right hand on air-brake lever, opened the throttle wider for the slight incline to the top of Glazier Hill. The engine lurched to the crest, then, with steam shut off, started on the five-mile coast downward.

The hand of the indicator jerked steadily to thirty-five, forty, forty-five, fifty, sixty, seventy, and stayed there. The night wind whistled shrilly through the cab, whipping the bell-cord viciously against the roof, and swaying the bell itself till it protested plaintively. The headlight case, sharply outlined against the fan of light beyond, described unsteady arcs as the tender swung this way or that; while at every lurch the iron apron between tender and engine scraped and rasped and clattered truculently.

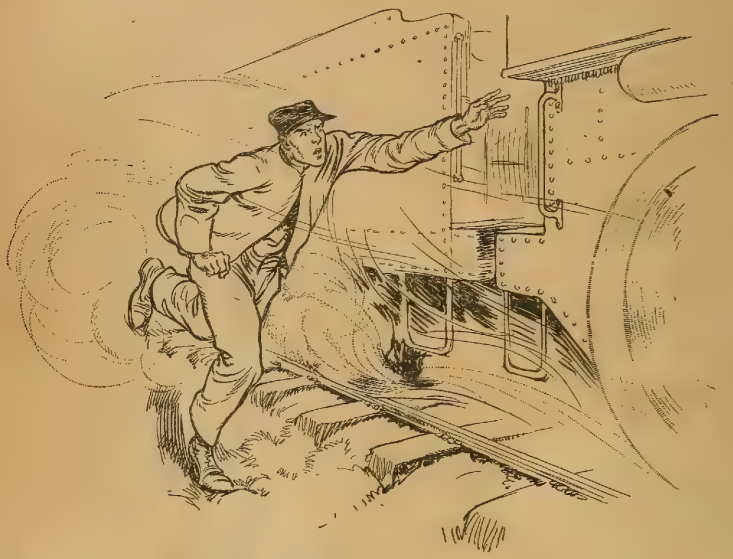
The telegraph-poles to the right of the track, grimly cross-armed far ahead against the star-shot velvet of the prairie sky, lengthened swiftly to the dim outer

HE LAUNCHED HIMSELF FRANTICALLY OUT TOWARD THE WHITE LINE OF SAND.

edge of the light-shaft, hurtled gigantic through it, were swallowed voraciously by the hungry night.

Ragged splotches of mesquit, left unscarred by fire-guards beyond the right of way, lumbered gloomily past, while with such gusto and self-evidence as to whom he wished they were, that he climbed again onto his seat, smiling, and took a fresh chew of tobacco.

A fourth mile whipped past, blurredly, blotchily, streakily, and over sixty feet



HIS OUTSTRETCHED HAND COULD NOT TOUCH THE RAIL.

now and then, still farther out, a tufted Yucca, cleanly silhouetted from the summit of some gentle rise, paced slowly to the rear.

A mile was gone! Two miles! A third. Through Huelger's Cut a swirl of fine gravel stormed the cab. "Look what you done!" yelled Carl, ducking his head.

Redding roared, spitting vigorously, "I forgot!" Then he grinned, and with his free hand put thumb to nose and wiggled his fingers amiably at his fireman. "Wouldn't that gravel you!"

The latter got off his seat, spat on his hands, and made certain according-to-code motions as to what he wanted to do to somebody's head. Happening to glance at the steam-gage, he grabbed the chain and jerked open the furnace-door, shooting in a couple of shovelfuls of coal

of low trestle they roared splittingly into the fifth. Now the damp wind slapped their faces. Somewhere ahead was the Canadian River. Redding pressed over ever so little the brass lever under his right hand. Straightway a high, thin wail cut into the harsher sound chaos, and the cab felt a slight tremor.

He pressed farther. The wail rose to a scream, the tremor to a shudder. The driver brake-shoes clamped closer and the big wheels, fretted hot, struggled impotently to shake off that relentless embrace. Back dropped the hand of the indicator, sixty, fifty, forty, thirty, and at the bridge, fifteen.

The headlight speared a stretch of black sluggish water, sullenly menacing, where it had cut deep into the bank at the farther end of the bridge, just where the track elbowed in a sharp curve.

Redding looked back as the engine took this curve. He spat contemplatively. "The treacherous son-of-a gun!"

For half a mile beyond the bridge the track was on a flat level. Then it took a slight dip and swerved around The Council—a group of ragged rocks quaintly up-tossed to form a circle of squatting figures. From there on the rise in the land, unevenly sand-duned and hillocked, was such as to conceal for a full mile the bed of the railroad.

Half-way to the dip the fireman suddenly jerked himself upright and stared wildly out into the night—not down the track, but across the space bound by the coming curve. His face whitened under the coal-dust and grease. He rubbed his eyes — then swung off his cushion with a shrill yell.

"There's 202's light! For Heaven's sake, jump, Frank!"

The last word was hardly past his lips before he was out on the cab-step. He hung a fraction of a second by the hand-rail, and then launched himself frantically out toward the white line of sand ten feet from the track.

Redding had dropped to his feet. He peered out. From beyond the faint outline of a rounded hummock a long thin shaft of mellow light pierced the night's blackness.

"He's right. It's 202!"

Snap! The lever shot to the emergency notch, but the grinding, furious, upheaval for which he braced himself tautly did not occur.

For the first time in her life, 292's air would not work!

Only one thing to do. He slammed forward the reverse lever, and, as a shower of slivered sparks shot from under the wrenched drivers, opened the throttle to its widest.

Then he ripped the mild summer night back and across and up and down with a misery of sound from the raucous throat of the whistle.

Straightway it was answered, and Redding knew what could be done was being done by 202. His own engine was all atremble with the battle of the drivers to grip the rails and the thunder of the unshackled steam.

The gage showed eight miles an hour as 292 skidded down the dip at The Council and, rounding the curve, shivered into the full glare of the east-bound passenger's headlight.

Redding saw they must come together, but felt that no serious damage would be done. He hung on to the cab hand-rail till but a score of feet away, then dropped. He stumbled, rolled off into the ditch, and sat up just as 292 bumped into the other engine.

There was a splintering of wood from a shattered pilot, a clang of both bells, a tinkle of smashed headlight glass. No. 202 shoved the pusher forward a few feet and came to a standstill. Not so 292.

Redding rubbed his eyes. Then he remembered, and leaped to his feet. He had thrown over the reverse-lever, and full steam was on!

The exultant wheels, with the help of 202, had at last come into their own. Still slipping at times in a blur of spokes, they clung enough to the rails to send the engine forward faster with every stormy, sputtering breath from the cylinders.

Redding raced silently at the side of the cab-step, but, strain as he might, his outstretched hand could not touch the rail that would offer him grip. More frequently the huge drivers bit sure, and the rocking engine gathered speed.

The panting young engineer saw pictures. He saw the half-mile stretch of straight, smooth track ahead. No. 292 would end it at seventy-five miles an hour. He saw the sharp swing to the track as it met the bridge. When his engine struck this—Heaven! What a thing to see! A black, raging thing of the night in a flying leap—up, out, down, down into that bottomless hole, into arms patient a hundred years for this! He saw himself, his hopes—her!

A thick, dry sob wrung from his lips. Then his toe struck a tie and he was hurled sprawling—to reach at length the hand-rail. His fingers snapped tight. His legs were whipped across the rough ties for a few yards, then he drew himself up into the cab.

With steam shut off, and new-gained freedom lost, the engine slowed sullenly to a clanking, grumbling, curse-the-luck stop. A scared voice spoke from out the darkness.

"Frank! You there? What's happened!"

A white, scratched face peered up into the cab. Bits of cinder and sand clung to the yellow foretop.

The engineer looked down. He solemnly put thumb to nose and wiggled his fingers. "Wouldn't that gravel you!"

The timekeeper was playing his usual afternoon game of solitaire, sorting time-slips. The door opened and a big-shouldered, spruce figure entered.

"Hallo, Frank — Mr. Redding, I should say. Why, is to-day the big day? Didn't know it was so soon!"

The pink cheeks grew somewhat pinker, but the teeth gleamed in the usual wide, attractive grin.

"Shucks! Naw! Can't a fellow wear a new pair of pants once in a while?" He laid a cigar on the desk. "That's for my time. Gimme it. Last month's, I mean."

"Huh! When *is* the day, then?"

The engineer again protested. "Honest! Just want to take a lay-off. Since night before last my—er—nerves have been—er—upset, doncherknow."

The timekeeper grunted, but reached for his engineers' record. "Explanation's bum. But, seriously, I heard about your doings. Close shave, wasn't it."

"Yep. I'm in the clear all right, though. But poor Farquehar has got the can, I hear. I'm sorry. He's decent. But he made a bad bust."

"Bull the order, did he?"

"Um-hm. Got it 'right over all east-bound trains' instead of 'east-bound extra trains'."

The other turned quickly. "What's that?"

Redding reached for his wallet, and took out a thin, crumpled sheet. "My copy. See what it says."

The timekeeper smoothed it out flat.

6-7, 10.20 P.
C. & E., No. 18.
Engineer, Engine 292.
C. & E., all trains east.
Engine 292 will assist No. 18, Canadian to Glazier, and will run extra Glazier to Canadian with right over all east-bound trains.

W. G. D.

"Well?"

"Why," slipping it back into his wallet, "Farquehar left out the one word that cut the mustard—'extra.'"

The timekeeper rumpled his hair. "Oh—he did, did he!"

"Sure. Mr. Winter's record shows that, he says. But I'm sorry for Farquehar. He's got some dandy kids. And his wife ain't very strong. Well, I gotta go up-stairs and see the chief. Have that for me when I come down?"

The timekeeper nodded and opened the record. But for some time he stared down unseeing at the figures. "Farquehar! What'll he do now?"

He spread out his own particular scrap of clip—his "precious thing." Word for word, it read as Redding's copy.

The timekeeper struck the desk a loud blow with his clenched fist.

"Curse A. W., for a rotten, cowardly sneak! Oh, he'll get his, all right; he'll get his!"

He began furiously to write out the engineer's time-check.

THIRTY-SEVEN MILES OF CARS.

A REPORT issued by the Pennsylvania states that more perishable freight was shipped by the farmers of southern New Jersey during the month of July than in any previous month during the history of the section. During that month a million and a half dollars' worth of produce was distributed over the New England States, the middle West, and Canada from points located on the West Jersey and Seashore, a part of the Pennsylvania system.

Compared with these figures in July, 1907, seven hundred and sixty-four thousand eight hundred dollars' worth of produce was shipped from the same district, while in 1908 the value totaled one million one hundred and seventy-eight thousand dollars. There's something in farming, after all.

Thus, 1909 showed an increase of over thirty per cent over 1908. Thirty-seven miles of cars were used to transport these products of south Jersey farms.

Lovett—Harriman's Successor.

BY ARNO DOSCH.

WHO will succeed Harriman? Who will take up the great work he left undone? Who *can* do it? These were the questions heard on every side when the master-builder of the American railroad world passed away last September.

The mantle has fallen on the shoulders of Robert S. Lovett, a Texas lawyer. Born in a backwood's village, overcoming the most serious obstacles that poverty can put in the way of a young man's success, he paid dearly for an education and worked up inch by inch, the master of his own destiny.

Jay Gould, Huntington, and Harriman in Turn Recognized the Executive Genius of the Man Who Will Now Be the Guiding Hand of Properties Worth $5,200,000,000.

AN austere Texas father, a generation ago, looked up across the old-fashioned sitting-room table, and said to his tall, beardless son:

"Robert, I have decided to make a doctor of you. You may prepare to go to Tulare University, in New Orleans, and I will pay your expenses."

That was all that was necessary, so far as the father was concerned. He had made up his mind about the matter, and it was as good as settled. He was used to having his way in all things, and his son had always obeyed without question.

"But I don't want to be a doctor, father. I am going to be a lawyer."

At this unexpected revolt the father's cold, gray eyes settled on the determined face of his son.

"But I said you were going to be a doctor. I don't like lawyers."

"I'm sorry for that, father," replied the boy, "but I have decided to be a lawyer."

He had unconsciously accented the last "I," and it gave him an uncomfortable feeling of embarrassment to have so openly thrown down the gage to his father; but his gray eyes never flinched as he regarded his stern parent.

"I HAVE DECIDED TO BE A LAWYER."

There was a marked resemblance between the two. They were Southerners of the masterful kind. The Civil War had not broken the spirit of the father—and he had handed on his courage to his son. Neither knew what it was to give in.

The father broke the silence.

"Then, you can educate yourself," his thin lips articulated slowly.

Knew His Mind Early.

But, being a fond father, who had raised two sons and two daughters after his wife's early death, he stood in the place of both parents, and, so far as it was in him to unbend, he talked the matter over; but the boy did not waver. He had reached the age of fifteen, and there had never been a time since he could first remember when he did not feel capable of taking care of himself in every way.

So, one night he packed his clothes, and in the morning kissed his sisters good-by. The father smiled behind narrowed lids as he saw his son stride away into the world—his back straight and his legs falling into a long, easy stride for a ten-mile walk. He had no fear for the boy's future.

Neither had the boy. In a few hours he reached the camp of a gang of swampers, who were grubbing stumps ahead of the grading-crew making track for the Houston, East and West Texas, then building along the eastern border of the State.

He was put to work immediately, and earned a man's pay. Later he learned that tie-splitting paid better, so he changed to that occupation, and in a few months he had risen to the dignity of driving a team attached to a scraper. He worked there some months, and received three hundred dollars. Of this glorious sum he spent, during the time, just nine dollars and seventy-five cents, saving the rest for a year's schooling in Houston.

This was the beginning of the career of Robert Scott Lovett, chairman of the executive committees of the Union Pacific and Southern Pacific railways. He is now forty-nine years old. He sits in the Equitable Life Building, 120 Broadway, New York, and directly controls the destiny of twenty-five thousand miles of the most carefully systematized railroads in the world. Indirectly, he has a voice in the management of fifty-two thousand more.

As the successor of the late E. H. Harriman, he has in his hands the fate of properties valued at five billion two hundred million dollars.

When Mr. Lovett was announced as Harriman's successor, a thousand questions immediately arose. Who was Judge Lovett? Whence came he? Why had we not heard of him before? How could a man rise so unobtrusively to such eminence?

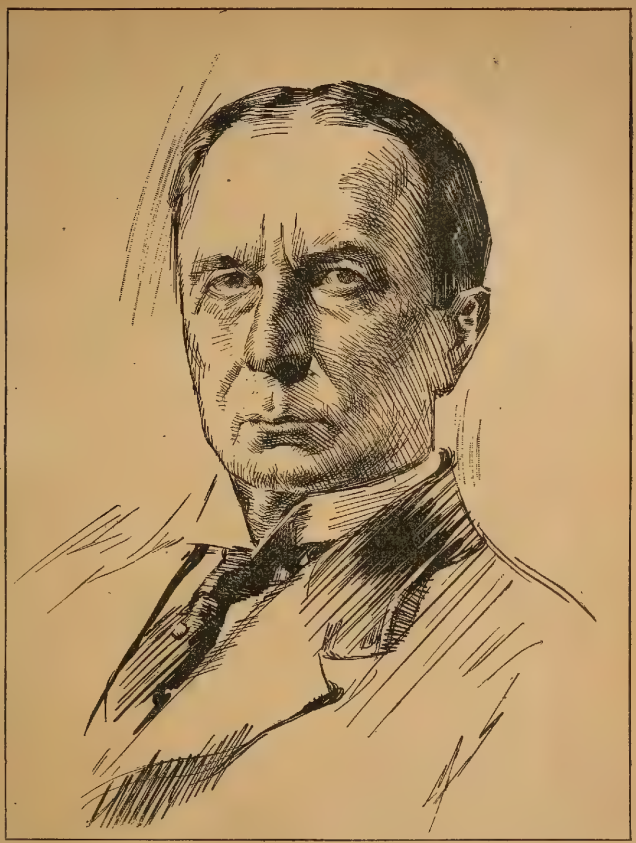
His life-story is like a great drama. It deals with such usual aspirations and such common situations that the force of it seems likely to be lost, until, as it unfolds, it develops a great human struggle—that of a man who fought against hard conditions to fulfil his destiny.

The "Silent Texan."

The nation is only beginning to know him, although he has been a man of wide influence for years. To present him so as to appeal succinctly to the popular imagination, he might be called the "Silent Texan." He has already earned the title.

What his influence in the railroad world will be, it is impossible now to conjecture. It is expected that he will carry out the policies of Harriman, uniting the Harriman lines in closer and closer cooperation. During the last year of Harriman's life he conducted almost all the active work, directing and harmonizing with the plans of the two great operating factors—J. C. Stubbs, director of traffic, "the money-maker," and Julius Kruttschnitt, director of maintenance and operation, "the money-saver." Harriman, always wise in his selection of men, had made of them a team which increases efficiency and dividend.

Judge Lovett's first duty will be to prevent the disintegration of the traffic system as established and to widen opportunities toward even greater efficiency. The constructive side to Harriman's operations in the stocks of railroads lay in the cooperative possibilities of the lines controlled. To hold together the great



ROBERT SCOTT LOVETT.

Drawn by M. Stein, from a photograph copyrighted by Gessford, New York.

system he finally established requires a strong man.

The man who is now in that position, in personality and experience seems to be thoroughly fitted for the undertaking. He has had a training as a railroad man which few have enjoyed. He not only gathered in a great deal of information on his own account, but he absorbed the knowledge possessed by Jay Gould, Collis P. Huntington, and E. H. Harriman.

No one could wish to learn from more able masters.

Let it be remembered by every young man struggling along in the railroad service, doing tasks that appear to him to be

lacking in opportunity: Judge Lovett would not be where he is to-day if it were not for the fact that he served a railroad in the humblest and most monotonous capacity.

Added to his experience in construction, he passed a year at the thankless task of a country station-agent, and worked six years as a night bill-clerk. No more severe apprenticeship could be asked.

He realizes the value of his training now. It did not mean much to him then. He regarded the work as a necessary evil to keep life in his body while he studied law.

HE HAD NO FEAR FOR THE BOY'S FUTURE.

But the fierce contact with the earth, the ready capability of bridge-builder and engineer, and the shrewd practicality of a trainman, gave him an understanding of what can be done with a railroad which helped him at every important step in the steady climb upward, until he stood beside the wizard of railroading and told him where he was right and where he was wrong.

It is a well-known fact among Judge Lovett's associates that he has no personal ambition. He does not care for power. He realized his ambition in life when he became a thorough lawyer.

His ambition in that direction knows no limits, but to pile up millions upon millions has no lure for him.

Harriman Knew.

When Harriman, in 1904, brought Judge Lovett from Texas to be his chief counsel, Wall Street did not realize this new and powerful influence that was being introduced. It is doubtful whether Harriman realized, himself. It is rather difficult, in fact, considering the standards of to-day, to appreciate Judge Lovett's attitude.

He would have been better understood sixty or seventy years ago, when the point of view of men was different. To him life carries its duties, chief of which is that a man must fulfil his destiny. He has work to do in the world, and he must do that to the best of his abilities.

If Judge Lovett's fortunes had confined his life to the backwoods of Texas, he would have prepared his small cases with the same painstaking care with which he lined up the defense for the Harriman merger in the suit for its dissolution brought by the Interstate Commerce Commission.

Pure grit has brought him to the top of the ladder. Life has always been to him a serious matter, and he has not trifled with it. His presence is dignified, and must always have been so. There have never been many people who called him "Bob" Lovett.

He has a natural courtesy, easy manners, and consideration for others, and to the men who work with him he is friendly and sympathetic, but he could never have been a "good fellow." It is not in his make-up.

All these things are plainly written on his face. It is easy to believe that he has never "sowed his wild oats." He feels himself superior to dishonorable action.

The chin is absolutely determined, but not hard. The severe mouth is drawn into a straight line with thin lips that might denote cruelty if the eyes did not show kindness. The nose is purely racial in its characteristics, indicating the

strength that was born in him. But the power of mouth and chin and nose all feel the tempering of his eyes, which appeal, perhaps, beyond the point of sound judgment. No one could look into his eyes and think evil of him. They show that high order of intelligence in which is neither trickery or self-seeking.

What His Face Tells.

His countenance might have come out of an old portrait. At first glance, he is rather remindful of the old-time Yankees. Men of his type are not developed in cities. When you learn that his father was a Georgian, who pioneered into Texas long before the war, much is explained.

Physically, he is erect and strong. The fact that he has not since his youth turned his hand to physical exercise, even in sport, has not told on his athletic build. Years of wearing night-work have not broken his health. Even the rush of Wall Street could not quicken his firm tread.

When he first went to work on the railroad, he was already hardened to labor. Since the day that his father returned from the Civil War and announced that they would all have to work, as they could no longer pay the negroes to work for them, there had never been a let-up.

Besides the plantation in San Jacinto County, where they lived, the father, William L. Lovett, started a country store and public cotton-gin. Between the three, at all of which the children worked, they found their days and evenings well taken up. During the winter they squeezed in three or four months' schooling.

His Father's Misfortune.

As they grew older they worked harder, they became prosperous, and their family was regarded as well-to-do. The father maintained his importance in a growing community, and was able to go on the bond of a fellow citizen who was elected tax-collector.

For this friendly act he received no compensation. The tax-collector absconded, and William L. Lovett had to make good the peculations. This reduced the family to the point where it had been at the close of the Civil War, with the added advantage that the children were older and better able to help. Without a whimper, they turned their hands to work again and forgot the loss.

The Texas which Judge Lovett knew as a boy is not the Texas of open ranges and cowboys. The settlement of which his family formed a part was in a remote valley surrounded by timbered hills. With the years the father lost something of the Southerner, and became more of the Westerner. The sons grew up typical Texans.

It was the day of the six-shooter and the Bowie knife, which men found useful, not only against one another, but as a protection from wild animals. The

HE LEARNED THAT TIE-SPLITTING PAID BETTER.

Lovetts lived ten miles from Cold Springs, the county-seat, and the intervening distance was without a house. It lay through a rough country full of deer and bear, which Robert Lovett hunted from the time he was big enough to point a rifle.

These woods also contained such dangerous animals as mountain-lions and timber-wolves. Returning from Cold Springs after nightfall, which frequently happened, young Robert often heard the deceptive wail of the panther and the chorus of its fellows from every peak. As this died away, there rose the howls of the wolves hunting in packs.

HE DIRECTLY CONTROLS THE DESTINY OF TWENTY-FIVE THOUSAND MILES OF THE MOST CAREFULLY SYSTEMATIZED RAILROADS IN THE WORLD.

They sent a chill to his bones—but the next time there was occasion to return from Cold Springs at night, he rode back alone, as usual.

At one point on this long, lonely journey was a spot locally known as Soldier's Camp. During the war a regiment had been raised in the valley for the Confederate army, and this had been their mustering place. Before they marched away, a quarrel between two of them arose one night, and one killed the other.

He Feared a Ghost.

The negroes immediately became superstitious of the spot, and they instilled their fears in the young boys of the neighborhood. Robert Lovett, at the age of ten, had absorbed all these superstitions and had a thorough belief in ghosts. Of this large family, the most prominent local member was the ghost of the dead soldier, and his activities were vouched for by any number of negroes who had seen him. His purpose in walking, the negroes soon decided, was to take vengeance on any member of the human family who crossed his path.

When the boy, returning home from the market-place in the dark, approached the spot, he became uncomfortable about it long before he was within striking distance. As it became imminent, the hair prickled under his hat, and, six-shooter in hand, he rode down upon it, determined to meet what death was prepared for him.

Each time, as the awful spot was passed, he drew his breath and scampered home on his pony, safe for the night. But on the next occasion the terror was unabated.

He was convinced that, sooner or later, the ghost would get him. The chances were too strong against him.

Face to Face.

One night he rode home under a moonless sky, the stars so thickly clustered that their pale light spread thinly along the uncertain road, lighting the darkness so that trees and banks he was long familiar with took on strange shapes.

The forest was silent, but stirred as if the earth were about to wake and scream with a nightmare. He seemed to be getting nowhere. The journey was intolerably long.

The distracting light even deceived him as to how far he had progressed until he suddenly rounded a curve near the fateful spot. It took him a second to realize it, but a form — white and ghostlike—fluttered over the road.

The pony started and quivered, and the world stood still. All the terrors of the eight miles that lay behind heaped up at his back. It was not in him to turn, but he hardly dared go forward. In his excitement he spurred the pony, and found himself racing at the awesome vision.

The pony's hoofs pounded the hard road, waking the birds in the near-by

THE FATHER STARTED A COUNTRY STORE.

trees, but worrying not the ghost in the highway.

He was in for it, and held the six-shooter cocked for whatever use it might be to him. He fancied the ghost moved, and with a fresh spurring he rushed on the catastrophe.

"*Quack, quack, quack!*" went the ghost, and fluttered into the forest.

He passed the same spot when he went away to work on the railroad, but by this time the world—natural or supernatural—no longer held any terrors for him. He was a full-grown man with a purpose and a determination to carry it out. He scorned the usual weaknesses of youth. Grading-camps are not usually the best place for country boys of fifteen; but, so far as Robert Lovett was concerned, there were no temptations.

The railroad through which he found a way out into the world was only 232 miles long when completed. It extended from Houston across the line into Louisiana, ending at the quiet river town of Shreveport.

It was built by Paul Bremond, a rich Houston citizen, in the time of individual financing. He used his own money on the enterprise. Work was begun on it in 1871, but it was not until 1875 that the grading-crews reached San Jacinto County. It was then that Robert Lovett did the first piece of work outside his own home. The road has long since become part of the Southern Pacific system, and it is now one of the least of the holdings over which Judge Lovett has control. Through it he rose to fame and fortune, and now, in turn, its fame is derived from him.

He did nothing but manual labor during the first year. When he returned from his year's schooling in Houston, driven back by the lack of money, he went to work as a clerk in the store of E. P. Smith at Shepard, on the line of the railroad. After he had been there a short time, his proclivities toward the railroad business secured for him the position of station-master.

There he learned another important side of the business, which many men high in the railroad world have found valuable. He gave up the clerkship, but continued in Smith's employ as bookkeeper, doing the work at night. His day was from seven in the morning until

HUNTED FROM THE TIME HE WAS BIG ENOUGH TO POINT A RIFLE.

THE GHOST WAS VOUCHED FOR BY THE NEGROES.

midnight. At this he continued a year, and saved several hundred dollars.

This was enough to give him further opportunity to acquire an education; but by this time, being seventeen years old, he considered himself capable of deciding on his own curriculum. That provided by the high school in Houston had in it much that he could see no use for, so he did not return; but hired a tutor, who taught him just the things he wanted to know. Latin, in particular, seemed to him a necessity for a lawyer, so he mastered that language.

He did not wish to be again interrupted in his studies for lack of money, so he secured the position of night bill-clerk in the Houston office of the Houston, East and West Texas. This paid him forty dollars a month, and, after his savings gave out, he lived on that income, and paid for a tutor.

Men who have to work so hard for an education fully appreciate it. At night the work usually lasted until eleven or twelve o'clock, but when there was a rush of business he had not always finished the way-bills when the new day broke. Many a morning he sat down to his serious purpose of study gaunt with lack of sleep.

At the age of twenty-two, or after five years of this trying life, he was admitted to the bar. But even then he did not feel thoroughly fitted for his life-work, and continued his studies another year before attempting to practise his profession.

His career did not go unnoticed. The other men in the office and those of the rank above knew of him. When he announced that he intended going back to Cold Springs to practise law, the railroad officials offered him the local attorneyship. They knew the caliber of the man.

Moreover, they did not forget him. The cases he had to argue at first were chiefly matters pertaining to the cow-catching tendency of trains, but he gave these his serious attention. His reward came in less than a year, when he was removed to Nacogdoches, where he carried on the railroad's business over a much larger territory.

This took all his time, and he soon became known for the number of cases he won. At the end of the second year, he was sent to Houston and made the general attorney for the road. When it went into the hands of a receiver, a little later, he was already known as one of the best railroad lawyers in the State;

HE HELD THE SIX-SHOOTER COCKED.

and the Texas and Pacific, at that time the most important road in the Southwest, made him an offer. He went to Dallas as assistant general attorney, and when he was twenty-nine he was made general attorney.

Jay Gould owned the line, and was in the habit at that time of his life of going down to Texas in January and remaining until April. He spent most of the intervening months in Dallas, where he found the company of the young lawyer agreeable. Unconsciously, during many meetings, he imparted to Lovett's all-grasping mind much that he knew about railroads.

He had a good position, one with which most men would be content. But he aspired to a more general practise. He had, in fact, absorbed all that there was to be learned where he was, and was anxious for a wider field of activity.

After he had been four years with the Texas and Pacific, an offer was made to him to become a partner in the firm of Baker, Botts & Baker, then an important law firm. The two older members retired with his entrance, leaving all the work of a large clientèle on the shoulders of Captain Baker and the new partner.

Among other clients were the Missouri, Kansas and Texas and the Southern Pacific railroads. The railroad end of the business naturally fell to Lovett. He could not escape it, if he had desired. Here another big railroad man, Collis P. Huntington, sought his advice.

Texas was beginning to legislate severely against the railroads, and Lovett's work for Huntington was important. He won many legal battles, and in the conferences with Huntington absorbed another great mass of railroad knowledge. The two men were early on a basis of friendship, which continued until Huntington's death.

When Harriman appeared as controlling genius of the Southern Pacific, he looked over the system and learned it completely. He sought information everywhere available.

He also knew much about railroads, and could tell whether he was being accurately informed. In Texas, he found that the most reliable information he received was from Judge Lovett. As a consequence, when the system was reorganized, he retained Judge Lovett as the legal representative in Texas.

During the next three years the railroad's business occasionally demanded Judge Lovett's presence in New York, and once in a while Harriman went to Texas. Harriman's respect for Judge Lovett's opinion grew with each meeting.

HIS DAY WAS FROM SEVEN IN THE MORNING UNTIL MIDNIGHT.

Meanwhile, Harriman was perfecting his system. He created the administrative positions occupied by Kruttschnitt and Stubbs, and he needed a third man—the best legal adviser he could find. Looking over the field, he decided on Judge Lovett, and sent for him to come to New York. The two men worked admirably together, and gradually Harriman shifted more and more of the details upon the shoulders of his able colleague. During the last year almost all the work fell to Judge Lovett.

In fairness to father and son, it should not be forgotten that they made up their quarrel years ago; and the father, once recognizing that his son was right, let him go his own gait.

THE DAUGHTER OF THE IDOL.

BY JOHN MACK STONE.

A Captain Is Not Always Commander On His Own Ship, and That Means Mutiny.

SYNOPSIS OF PREVIOUS CHAPTERS.

ROLAND BURKE is a young boy sight-seeing in San Francisco during a visit to his uncle, Richard Engle, a famous explorer. While standing on the dock he is alarmed by a crowd of struggling men rushing down the street, evidently pursued by the police, and in his astonishment is hustled into the boat for which they are making. One of the men, who is struggling with the others, is kidnaped onto a vessel, and Roland, though unobserved, is also unable to escape. The ship puts out, defying the forts. On the boat he is discovered by Ruth Holland, who also seems to be there against her will, and who seems quite familiar with Richard Engle, though there seems to be some misunderstanding between them. In her cabin Ruth is annoyed by a man named Welch, who seems to have some power among the cutthroats. Engle interferes.

CHAPTER V.

A Villain Turns Pirate.

FOR a moment we stood thus, no one speaking, my uncle and Frederic Welch breathing hard. I expected to see Miss Holland in tears, but I was much surprised. Her face was white and her lips were trembling, yet there was something in the look she gave Uncle Dick that made me glad I had betrayed myself to help her.

"Leave the cabin!" Uncle Dick commanded Welch.

Welch sneered, straightened his collar, and started to walk across the room. Uncle Dick remained standing beside the door, watching every movement.

His manner told me that he suspected treachery. But Welch made no attempt at violence. He slipped into the passage and went into one of the cabins. Uncle Dick slammed the door shut.

"Something must be done at once," Miss Holland cried. "He'll tell them that the boy is here."

"Roland must leave this cabin," Uncle Dick said.

"Where are you going to take him? They will search your cabin, too."

"My cabin will not be safe."

"Then—"

"We must find a hiding-place."

Uncle Dick went out, and presently returned and beckoned me to follow.

"Be careful," Miss Holland warned.

We went outside, and started to go on deck. Half-way up we heard some one approaching. We ran down quickly, and went into Uncle Dick's cabin; and when the sailor had visited Captain Hawson's cabin, and had gone back to the deck, we slipped out, and made the deck in safety.

I crawled beneath a lot of sail-cloth and rope, and Uncle Dick went forward. The sea was not so calm, and the ship was tossing like a cork on the water. I heard several men go below and come up again, but could not see who they were. Finally I heard Welch's voice. He was talking to another man within a few feet of my hiding-place.

"I tell you the boy is aboard," I heard him say. "They have hidden him somewhere, but it ought to be an easy matter to find him. When you do—"

"It will be an easy matter to cut his throat," the other man answered.

"I do not want his throat cut," Welch replied. "I want him to live. There are worse deaths than that which comes by cutting the throat."

"Ah! You want him to die with the others?"

"Exactly," Welch replied. "If the crew finds him here, he'll be thrown overboard in an instant. He must live to reach the island. I have certain plans which must be carried out."

"What do you want me to do, then?"

"If you find the boy, pretend to be his friend, get into his confidence, make him believe you are hiding him to save him, and so keep him out of sight of the rest of the crew. When we get to the island I'll play my hand."

"Very good," the man replied, and then they went forward.

For the hundredth time I caught myself wondering what it all meant. I was glad that I had overheard, for now I could be on my guard. The man would be serving a double purpose—my uncle's as well as Welch's—by secreting me from the crew. Perhaps, in the end, he would serve my uncle's purpose best.

Welch had said he wanted me to die with the others. Who were the others? My uncle was one of them, I supposed, but was Miss Holland the other?

Why had those men acted so peculiarly in her cabin? What was it she refused to do at their bidding? What part was Welch playing in this game of which I knew nothing?

It was suffocating beneath the pile of sail-cloth, and I determined to leave the place and find another. It was an easy matter to slip away in the darkness and make my way forward toward the forecastle. There were all manners of hiding-places there that would serve until daylight.

Far up near the bowsprit I crawled behind a mass of rope. From my position I could look over all the deck; could even see the man at the wheel. Captain Hawson was pacing back and forth near the rail, with his hands behind his back. Three or four members of the crew were going about their work.

After a time I saw Uncle Dick come forward and speak to Captain Hawson. At first I could not hear what they said, because of the rushing wind, but presently they walked toward me, and came to a stop directly beneath, sheltered from the wind and spray.

"I suppose money would not do it?" I heard my uncle say.

"It will not," Captain Hawson replied.

"I thought you'd do anything for money?"

"Most things," the captain admitted. "But this is different. I made an agreement with them to capture you and take you over. If I had failed to capture you, it would have made no difference. But since you have been captured, since the crew knows you are here, things are changed.

"It would be as much as my life is worth to let you go now. They would hunt me like a dog from one end of the earth to the other, as they have hunted you. I would be safe nowhere. I'd die some day—as you are going to die.

"Then, there is another thing. I couldn't do it if I wanted to. The crew is watching me. You forget they belong to the island. The moment I started to turn back they'd seize the ship, throw me overboard, and run the chances."

"Then there is no hope?" my uncle said.

"I've heard a great deal of you," the captain answered; "and I always understood you were a brave man. I suppose it is different now that you are staring death in the face."

"I have stared death in the face many times without flinching," Uncle Dick replied. "There is, perhaps, another reason why I wish to escape."

"A woman?" questioned the captain.

"No—a boy."

"Your son?"

"My sister's son. Do not ask how this affects him, but it does."

"You speak as if he were with you, doomed to a death like the one that is to be yours."

"You do not understand," my uncle said. "Then, nothing can be done?"

"Nothing."

"Have you no heart, that you capture people and deliver them up to executioners?"

Captain Hawson's voice changed. "Perhaps, in this case, I think you merit

the execution," he said. "I have been a tough customer in my time, but have little respect for a man who would despoil—"

"Stop!" Uncle Dick cried. "You have gone far enough—that lie has traveled far enough! I was not the despoiler. I'll go to my death swearing it."

"You'll never convince me of that," said Captain Hawson. "I say it was you who despoiled—"

My uncle was at his throat before he could finish the sentence. Captain Hawson screamed as they clinched; then they fought back and forth across the deck like mad beasts.

Members of the crew ran toward them, fell upon them, tore them apart. Angry though he was, the breath half choked out of him, Captain Hawson's first words were to the men who held my uncle prisoner, telling them to set him free.

"Stay by me when Mr. Engle is near," the captain instructed one of the crew. "He presumes upon the knowledge that no harm must befall him to use violence."

"I fight no man who cannot fight back," Uncle Dick retorted; "yet there are some insinuations that cannot go unpunished."

Captain Hawson made no reply. He remained standing near the rail, waiting to see what Uncle Dick was going to do. I saw Welch come forward then, and look upon the scene.

"Having a little trouble with the chivalrous despoiler, Captain Hawson?" he sneered.

The captain whirled upon him. "Mr. Welch," he said, "only a coward insults a man who is down. There are reasons why there can be no violence between Mr. Engle and myself, but I know of no reason why there should be no violence between Mr. Engle and you.

"If you insult him again, I trust he will give you the thrashing you deserve. If he does not, I'll have you in irons. No man shall insult a passenger I have instructions to treat with every courtesy."

"Do you know to whom you are speaking?" Welch cried.

"Most certainly."

"If you know what is good for you, you'll keep a civil tongue in your head."

"If you know what is good for you," the captain replied, "you'll go below immediately."

"You'll regret your words, sir!" Welch thundered.

"Will you go below, or shall I send you?"

"Neither!" Welch screamed. "You have forgotten yourself, it seems. You shall know who is master here. You are but a puppet hired for certain work. I am the one who rules."

Captain Hawson stepped toward him threateningly.

"Go below instantly!" he cried.

Welch laughed. "Send me!" he said.

"I'll take you," the captain answered, and sprang upon him.

Welch dodged to one side, and called something in that foreign tongue to those of the crew who were standing near. They rushed in immediately, and grasped their captain.

"Captain Hawson," Welch said, "things have arrived at the stage where I find it necessary to take things into my own hands."

"This is mutiny—piracy!" the captain cried.

"Under ordinary circumstances it would be," Welch replied. "But these are not ordinary circumstances. First of all things, is to carry out the commands of one who shall be unnamed here. If mutiny is necessary to do this—"

"Seize him! Put him in irons!" Captain Hawson cried.

None of the crew moved to obey.

"You see?" Welch said. "They know whom to obey."

"You are taking command of this ship?" the captain demanded.

"I am."

"And what will you say when our destination is reached?"

"I'll say that you bargained with Engle to turn back, as I just heard you doing."

"You lie!"

"I heard you—no one else. I'll say it was necessary to take command of this ship to execute our enterprise successfully. I'll mention that such an act is mutiny, and will cause certain people trouble if the knowledge gets out. And then, perhaps, the knowledge will never get out, for a dead man tells no tales."

He spoke coldly and cruelly.

"That is what comes of treating Frederic Welch without courtesy," he ended.

"You cur!" Captain Hawson cried.

"Take him below and put him in irons," Welch commanded the men.

Captain Hawson tore himself loose, and was at Welch's throat in the twinkling of an eye. They went down together on the deck. I saw Uncle Dick rush toward them, but he was too late, for the members of the crew, uttering cries in their peculiar tongue, tore the belligerents apart, lifted Welch from the deck, and made Hawson prisoner again.

"Take him below! Put him in irons!" Welch commanded again.

"You'll do nothing of the sort," said a voice behind them.

All turned to look. Ruth Holland had stepped from behind the mast, into the circle cast by the smoking lamp. She held her revolver in her hand, and it covered Frederic Welch!

CHAPTER VI.

I Touch the Aitu.

"FREDERIC WELCH," she commanded, "have Captain Hawson released this minute and allow him to take command of his ship."

"I issue orders here," said Welch boldly.

"We will leave it to the men," she said.

One of them, the one who had been spokesman in her cabin during their midnight call, stepped forward, between the girl and Welch.

"We do not understand this," he said. "Why should the master and the most exalted one differ?"

"Will you obey me instantly?" Welch screamed. "Do you want me to report upon our arrival that you raised your hand against me?"

The man made a gesture of despair.

"We are to carry out the proper commands," he said. "If the master wishes it, this man shall go below in irons."

Welch smiled at Miss Holland, but was not outdone. She walked quickly toward them across the sloping deck.

"You are supposed to honor me, are you not?" she asked.

"We honor you deeply, most exalted one," the man replied.

"Do you honor me by refusing to obey the first wish I have ever expressed to you? This man you call master is doing a wrong. Captain Hawson should command the ship. Release him instantly!"

The man looked from her to Welch, uncertain what to do.

"Enough of this!" Welch cried. "Do as I command! I am your master; is it not so? You were told to obey me in all things pertaining to your land. Above all else, we were to secure possession of this man Engle and return him alive and well to the island. Is not that so?

"Now I learn that Captain Hawson is not to be trusted; that to trust him is to run the risk of never getting this man to the island. You know what failure means!

"This woman who faces you has a woman's heart and does not like violence. She pleads for the captain because she thinks he is being wronged. She does not understand as I do.

"Carry out my commands without further delay, and I will assume all the risk and responsibility when the island is reached. Refuse to carry them out, and I'll report you for a lot of unbelieving dogs to the one you most fear!"

The man hesitated a moment, then turned toward Captain Hawson.

"He goes below—in irons," the man said.

"Stop!" Ruth Holland commanded again.

The man stepped before her. "We must obey the commands of the man we are told to call master," he said. "The most exalted one will not attempt to hinder us?"

Miss Holland stepped before Welch.

"What is it you intend to do?" she asked.

"Command this ship until the voyage is over."

"And after that—?"

"It is none of your business."

"You know what I mean! What will you say when you sail into the harbor with Captain Hawson a prisoner?"

"Don't let that annoy you. I shall have some fitting story, believe me."

"A story that will cost the captain his life?"

"Perhaps; he insulted me a short time since."

"You cur!"

"Beware! Some curs bite!" Welch exclaimed.

Ruth stepped back toward the light again.

"When you start to take Captain Hawson below, I begin firing," she said.

"At the poor men who are carrying out orders, I presume."

"No," she said, "at you!"

"Do you dare oppose me in this? I have greater power here than you have!"

He motioned for the men to take the captain below. From my place up near the bowsprit I watched carefully, wondering how this scene was to end. Ruth Holland raised the revolver and pointed it at Welch.

"Tell them to stop!" she ordered.

The men went on. Her finger pressed the trigger.

"Stop!" Welch commanded.

"Have the captain released!" she ordered.

"No!"

"Have him released!"

There was no mistaking the meaning in her voice. Welch motioned for the men to release Captain Hawson.

"Are you satisfied now?" he asked.

"No; you must go below!"

"Very well!"

The alacrity with which he started to comply should have warned her. It did warn Uncle Dick and the captain, for they cried out words of caution at the same time. But it was too late.

As he neared her, Welch turned upon her suddenly and grasped her right arm at the wrist. One shot went wild. The next instant Welch had her revolver in his hands.

Uncle Dick and the captain sprang forward. But at Welch's command the crew fell upon them, thrust Uncle Dick back against the rail and made Captain Hawson prisoner again.

"Take him away!" Welch ordered.

Two of the men led the captain aft. The others remained.

"Miss Holland," Welch said, "I find it necessary to order you to remain in your cabin for the present."

"And if I refuse?"

"Do not forget that I command this ship!"

"And do not forget," cried my uncle, springing toward them, "that your act in seizing this ship is piracy. According to the law, any law-abiding man is privileged to deal with a pirate in an attempt to regain a ship for its commander!"

Welch laughed. "You expect to make the attempt?" he asked.

"If I should, the law is on my side."

"The men aboard this ship recognize another law, of which I am the present representative," Welch replied. "If you conduct yourself properly, you shall have every courtesy, sir. If you make a move to thwart me, it may be otherwise."

"You expect a man to stand by idly and be carried to his death?" my uncle demanded.

"Leave the deck!" said Welch.

He motioned for two of the men.

"Conduct Mr. Engle and Miss Holland to their cabins," he said.

My uncle started to walk aft. Ruth Holland stood still beneath the light. Both of them seemed to realize that the present was no time for violence. They would have to wait.

Uncle Dick stopped when he came up with Miss Holland, and motioned for her to go first.

"Of our own differences we will not speak at present," he said, "but allow me to say that I respect all womankind enough to guard even a woman who has caused me untold harm."

"What do you mean?" Welch cried.

"I mean it is not safe for a lady to remain alone in the presence of a man who insults women," my uncle said.

Miss Holland bowed and walked ahead of Uncle Dick. Welch did not reply, but the sneer was upon his lips as he watched them disappear.

I wondered what would happen next. It would be daylight in another hour, and I would be discovered if I remained where I was. It was necessary to find another hiding-place.

Welch remained on deck, several of the men near him. He issued orders much the same as Captain Hawson had done, and it was evident that he knew how to handle a ship.

After a time he went aft, toward the wheel. I watched my chance, and slipped down among the ropes and gained the deck. Keeping in the shadows I crept back, past the men on deck, behind the mast. There I waited for several minutes, crouching in the dark.

After a time Welch went forward again. Then I made my way aft as swiftly as possible, and reached my old hiding-place in the pile of sail-cloth. It seemed that no one was below in the passage. I grew bolder after a time and started to descend.

Before I could reach my uncle's cabin, I heard steps on deck. There was a door at my right, and no light came from beneath it. I tried it; it opened. I stepped inside, and closed the door again.

Some one walked along the passage and entered the next cabin. I could not see in the cabin I had entered, and was afraid to strike a match. I remained standing near the door, listening. Voices came to me from the next room.

"Unless they are made prisoners in their cabins, they will recapture the ship," Welch was saying.

"But it is forbidden to mistreat Mr. Engle, and no one dares lay hands upon the woman," replied the voice of the man who had been spokesman for the crew.

"It is necessary," Welch declared. "Suppose the god says it should be done?"

"What the aitu commands shall be executed," was the reply.

"Shall we implore the aitu?"

"If you say so, master."

"At once, then!"

There was no time in which to explore. I slipped behind the draperies, and found myself at the foot of a flight of steps. I crept up as far as I could, and my hands came in contact with something of metal—something shaped peculiarly.

At the same instant I heard them open the door.

"Some one else must be present, master; it is the law," the man told Welch.

"Call Captain Hawson, Mr. Engle, and the woman," Welch replied.

The man went out. I heard Welch strike a match. The draperies were so heavy that no light filtered through. I hoped that my place of concealment would not be discovered. There was a babel of voices.

"We are going to consult the aitu on a matter of importance," I heard Welch say. "The law, as you know, says that some one other than the two parties to the controversy shall be present. I have asked you to be here."

"If you are working on the belief of these fanatics to further your own despicable ends—" began Uncle Dick.

"Silence!" Welch commanded.

He spoke some words to the man in that strange tongue, and the other's voice was raised in a chant. Suddenly I felt the draperies before me give way with a jerk, and the next instant was almost blinded by the light.

I looked down at the group before me; a group of terror-stricken faces. Quickly I looked about me. At the head of the flight of steps was a great idol of metal, an evil, grinning face, a head surmounted by a crown of jewels. My arm had been resting upon its shoulder.

Cries from those below made me turn toward them quickly. The man who had accompanied Welch to the cabin stood before me, his hands shaking. Uncle Dick's face was white; so was Miss Holland's. There was surprise in Captain Hawson's, for he did not dream that I was in existence or on his ship.

"He is doomed, whoever he is," I heard the captain say.

Uncle Dick was screaming something at me. Miss Holland had begun to weep. Welch was cursing to himself. But above them all I heard the wail of the man who posed as spokesman for the crew, a wail that cut into my heart and filled me with dread.

"He has touched the aitu! He has touched the aitu!" he cried. "He has defiled the god! *And so he must die!*"

CHAPTER VII.

Uncle Dick Turns Coward.

INSTINCT caused me to reach in my pocket for the revolver that was there. I held it gripped in my hand, but did not remove it from the pocket.

"Who is this boy? How did he come aboard?" Captain Hawson demanded.

"He is my nephew," Uncle Dick said. "His presence aboard is an accident. I discovered him some hours ago, and have been trying to keep him hidden."

"Did any one else see him aboard and fail to report the matter?" Hawson demanded.

"I knew he was here," Miss Holland said.

"You know what I mean," replied Captain Hawson. "I was not speaking of you, but of those who believe. The boy is an outsider. He has no right on this ship. If any one saw him, and failed to report it—"

"Mr. Welch knew I was aboard, sir!" I cried down to him.

"It is a lie!" Welch screamed. "Had I known it, I should have reported it at once, that the law might have been upheld."

"He found me in Miss Holland's cabin," I went on, "and afterward I heard him talking with one of the men, telling him to make friends with me and keep me hidden from the others."

"Is this true, Mr. Welch?" the captain demanded.

"It is not true!" he replied. "And by what right do you question me? I command the Faraway at present, sir."

Captain Hawson confronted him, his eyes blazing. "Mr. Welch," he said, "things I have heard and seen within the past few hours have convinced me that you are not a true believer, but are working upon superstition and fanaticism to further certain ends of your own.

"I'll have nothing to do with the rest of it! I tell you now to your face that I will regain possession of this ship and put back to San Francisco, or go to death attempting it."

Welch turned upon him in a rage, crying orders in that foreign tongue. On the deck overhead was the patter of bare feet, and soon the doorway was crowded with swarthy faces.

"Seize these people and make them prisoners," Welch commanded.

Captain Hawson whirled around, and ran to the foot of the steps. Miss Holland crouched at one side of the cabin, holding her hands before her face.

It took but an instant for Uncle Dick to hurl Welch to one side and dash after the captain. And there, at the foot of the flight of steps which led to the idol, the captain and my uncle prepared for defense.

They had no weapons, and the others had, but could not use them. It was not a part of Welch's scheme to have my uncle murdered, and though I believe he would have seen the captain die without a bit of regret, it would not have been diplomatic at the time.

"Seize them! Put them in irons! They are trying treachery!" he cried.

The men sprang forward to obey, and then the battle began. Back and forth across the floor they fought, every one at a disadvantage in the small cabin. Repeatedly, Uncle Dick was made prisoner and fought himself free, and it was the same with the captain.

Finally, hard pressed, they mounted the steps, one by one, fighting the others back. At the door, Welch screamed for his men to hurry with their work. Ruth Holland still stood against the wall, but her hands were no longer before her eyes, for she was watching the combat.

"Seize them all—the boy, too!" Welch screamed. "He has touched the aitu—he must die!"

I stepped behind the idol, and peered around it. One of the men had Uncle Dick by the throat, choking him into submission. Without hesitation, I raised the revolver and fired. The man gave a scream, toppled over backward, and crashed down the steps to the cabin floor.

The smoke from the revolver filled the cabin. All of the men were screaming, some of them trying to get out at the door, and Welch was trying to prevent it, calling to them that they were cowards.

They rushed the steps, half a dozen of them, brushing Uncle Dick and the captain aside. I fired again, and one of them went down. The others fell back down the steps.

"After him! Cowards!" Welch was screaming.

But they had no heart for such fighting. With terror in their hearts they rushed to the door and fled through it into the passage. They were brave men, frenzied fighters, but they could not face a weapon with no chance to retaliate.

Uncle Dick and the captain rushed down the steps and fought with Welch and the one man who remained. I followed them, wondering what the next move would be.

It took less than a minute for them to conquer Welch and his man, and then the captain grasped me by the arm, Uncle Dick helped Ruth Holland, and we ran into the passage and through it to the end.

There the captain burst open a door, and we entered a tiny room, crept through another dark passage, and finally reached the deck forward.

The captain led us up near the bowsprit, where I had been hiding earlier in the night. It was a natural barricade, and commanded the deck.

"We'll fight it out here," the captain said.

Day was breaking in the east, and thus we faced a new danger. Our discovery was but a question of an hour or so. And, indeed, it was a matter of less time than that, for it was scarcely half an hour before we were tracked to our hiding-place and Welch stood down on the deck before us, sneering.

"Shall I fire at him, sir?" I asked Uncle Dick.

"No—no!" Hawson cried. "Shoot him down and these fanatics will rush into Hades itself to capture us and torture us to death. Do not waste cartridges—wait!"

Welch stood out where we could see him plainly in the gathering day. "Will you come down and surrender if I allow you the freedom of the ship?" he asked.

"No," replied the captain promptly.

"I am not speaking to you, sir," Welch said. "I am speaking to Mr. Engle. He is to be treated with every courtesy. So is the boy, now that he is doomed.

"It goes without saying that Miss Holland may be sure of every kind attention. Will you come down, Mr. Engle, with Miss Holland and the boy, and take the freedom of the ship?"

Uncle Dick turned to Ruth Holland and questioned with his eyes. What he read there caused him to turn toward Welch quickly and reply.

"We'll take our chances up here, sir," he said.

Welch called the men to him. They were armed with revolvers.

"I am giving you a last chance," he said. "Will you come down and take the freedom of the ship, or shall I have my men fire upon you?"

"You'll scarcely do that, I think," my uncle said.

"Do not presume too much!" Welch cried. "There is less censure in taking a dead man to the island than in allowing a live one to escape. For the last time—will you come down?"

My uncle hesitated; then—

"Yes!" he said.

Captain Hawson uttered an oath. My surprise was so great that I could not speak. Ruth Holland's cheeks flamed, and she gave my uncle a look of scorn such as I never saw before. Uncle Dick looked her bravely in the eyes.

"You do not understand," he said.

Her cry must have been like a knife in his heart:

"You coward!"

CHAPTER VIII.

Uncle Dick's Return.

UNCLE DICK stood on his feet and looked back at her. Then he stepped nearer to me.

"You will remain here, Roland," he said.

Then I understood, and would have spoken, but he motioned for me to keep silent. He sprang forward and made his way to the deck and walked up to Welch.

"I am to have the freedom of the ship, remember," he said. "If I am to die, my last days shall be comfortable ones at any event."

"I have nothing against you, sir," Welch replied. "I have forgotten the little trouble we had in Miss Holland's cabin. I am glad that you take matters so sensibly."

He turned toward us again. "Are the rest of you going to avail yourselves of my offer?" he cried.

"I, for one, am not!" replied Captain Hawson.

"Will you come down, Miss Holland?"

"I'd rather remain here and take my

chances with a brave man and a boy," she answered.

Welch cursed, and turned to his men as though to give an order, but Uncle Dick stepped forward again.

"Do not get yourself into trouble by firing upon them," he said. "There is an easier way than that."

"What is it?"

"Starve them out," my uncle said.

"That might serve for a time," said Welch.

He posted two men to guard us, then gave his attention to handling the ship. I crawled across to Miss Holland's side.

"You must not think ill of my uncle," I said.

"How can I think otherwise?" she demanded. "He has shown himself to be a coward!"

"Perhaps," I ventured, "he is not a coward after all. Just before he went on deck he whispered to me that I was to remain behind."

"What do you mean?" Captain Hawson demanded.

"I think," I answered, "that Uncle Dick has some plan. Perhaps he hopes to get weapons and return with them, or to get food."

"Let us hope such is the case," said the captain.

"If I have wronged him—" Ruth Holland began.

"I am sure you have," I interrupted. "Uncle Dick is not the man to be a coward."

"Welch will make some move soon," the captain said. "It isn't like him to allow us to remain here without annoyance."

"I wish you'd explain all this," I said. "What was there wrong in touching that idol?"

"You will understand before long," Ruth Holland said.

"But I'd like to know now."

"Not now," she replied. "It is too terrible. You poor boy!"

"I don't like being called a boy," I said. "What are the men doing now?"

They were arranging themselves in a semicircle on the deck, facing the rising sun. As we watched, one of them began a chant, and the others chimed in.

"It is a religious ceremony," Miss Holland said.

The chant ceased, and the spokesman stepped before them and looked up at us.

"Most exalted one," he said, "what is your answer?"

"It is 'No! No!'" Miss Holland cried in reply.

"We ask you to consider again."

"My answer shall always be the same," she said.

They chanted some more, and then went about their duties. I noticed that the spokesman held a little idol in his hand, such a one as he had placed on the table in Miss Holland's cabin that night, a tiny counterpart of the great god in the cabin below.

"What is it they want you to answer?" I asked Miss Holland.

"That, too, you must not know for the present," she replied.

We remained there for an hour, without anything of importance happening. Captain Hawson piled rope and sailcloth before us, to make the barricade better, and took my revolver.

"There are only three cartridges left," he said. "We must save one for Welch."

"You are going to shoot him?" I asked.

"Only as a last resort," Captain Hawson replied. "Let us hope that your uncle is indeed trying to do something to help us, and that he did not desert us through cowardice."

"Mr. Engle is back on deck," Captain Hawson said.

I looked down. Uncle Dick had indeed come back on deck, and was walking forward. I saw the men who were guarding us stop him, and prevent him from coming up to us. Welch came running forward.

"What do you want to do?" he asked my uncle.

"I want to get the boy," he said.

"Call him, then. Don't go up there!"

"He will not come unless I go up."

"Call him," Welch said.

Uncle Dick looked up at us. "Roland!" he called.

"Yes, sir," I answered.

"You'd better come down here with me, don't you think?"

I hesitated. Did my uncle really want

me to come down, or was it a ruse? Had he told Welch that story in an attempt to get back to us?

"Are you coming?" he asked.

"I think I'd better remain here, sir," I replied, hoping that I was doing right.

I saw by the look in my uncle's eyes that I had done right. He faced Welch again.

"You see, the boy will not come down unless I go up for him," he said. "He is frightened."

"I'll go up for him," Welch said.

He started to come up. My heart was pounding at my ribs again. I knew that Uncle Dick wanted me to remain where I was. It was Captain Hawson who came to my rescue.

"Welch," he cried, "if you come up here, I'll fire upon you."

"Scarcely," he replied, laughing. "You know what would happen, do you not?"

"I'll take my chances," the captain replied. "Remain where you are!"

"I'm coming up!" Welch answered, and began to climb.

I was watching my uncle as he crept upon the two guards, who were now standing together watching Welch. And then I understood, and whispered quickly to the captain.

He raised the revolver. Welch's head and shoulders showed.

"Go back!" the captain commanded.

Welch laughed, and started to climb on up.

The captain sprang forward and grappled with him. In a flash the two guards had started to Welch's assistance. It was the moment for which my uncle seemed to have been waiting. He hurled one of the guards to one side, securing his revolver as he did so, and in an instant was upon the back of the other, hammering him over the head with the butt of the captured gun.

The men were screaming, and others of the crew were hurrying forward. Captain Hawson picked Welch up bodily and threw him down upon the deck. He crashed against it, and lay still, and Uncle Dick sprang up to us, the two revolvers in his possession.

"We have weapons now," he said.

Ruth Holland plucked at his sleeve. "Can you forgive me?" she asked.

"For doubting my courage, yes; for the other, no," he replied.

"You'll always believe—that of me?"

"Until I know differently," he answered.

"Perhaps you'll know differently some day," she told him.

Captain Hawson interrupted them.

"Eyes open! Here they come!" he cried.

Even as he spoke, his revolver spoke, too. The first man of the crew to attempt to reach us fell back upon the deck senseless. Others dashed toward us, trying to climb to where we were. Uncle Dick's revolver spoke, then the captain fired again. And then the men on deck, rage-seizing them, opened fire upon us, and the bullets whistled by and fell about us like hail.

I do not know how it happened, for I did not feel it at the time. I only know that while I was working the revolver to send my last shot into the midst of the men below my arm grew numb suddenly and the weapon slipped from my hand.

I grasped my right arm with my left hand, and saw that it was covered with blood. Then everything grew black before me, and with the shouts and shots and curses ringing in my ears I crashed to the deck.

CHAPTER IX.

The Last Cartridge.

WHEN I regained consciousness I found myself on one of the bunks in a cabin. My arm was bandaged, and paining terribly.

It was dark in the cabin, but whether it was night I could not tell; for, as I gradually discovered, the one porthole was closed, and there was a heavy portière before it.

I lay still for some time, allowing my eyes to grow accustomed to the darkness. Then I saw a table in the middle of the cabin, with two heavy chairs near it, and that was all.

At first I heard no sound except the washing of the waves and the creaking of rigging, but after a time I heard shouts and curses and the reports of gunfire. I wondered whether my uncle and

Captain Hawson had been really conquered.

The sounds of battle grew louder. It was evident that the combat raged on the deck over the cabin in which I was a prisoner. I crawled from the bunk and, steadying myself against the table and chairs, made my way to the door and turned the knob.

The door was locked. I searched the cabin carefully, but found no weapon. The fight on deck raged fiercely. If I remained in the cabin my fate depended upon the outcome of the fight. I would rather be an eye-witness, I decided, and in event of the combat turning against my interests tried to find some hiding-place that would serve my purpose.

Again I tried the door, but it was fastened securely. Just as I was at the point of giving up in despair there were steps in the passage, some one fumbled at the door, and the next instant it was thrown open, and Ruth Holland stood just within it.

"You have recaptured the ship?" I asked.

"You poor boy," she said by way of answer, and held me for a moment in her arms.

"Tell me what happened," I implored.

"Your uncle and the captain fought them back," she said, "and we left our protection in an effort to secure control of the deck. But the men only got fresh arms and ammunition and renewed the fight. Your uncle and the captain are making a stand on deck, trying to prevent the men from driving them below."

"But you came here for me?"

"I am going to take you into my cabin," she said. "You'll be safe there, at least until we reach our destination. These men dare not harm me."

"But Uncle Dick—and the captain?"

"We can only hope for the best," she said.

She put her arm around my shoulders, and helped me out of the cabin and down the passage. I could hear the shots and cries plainly now, and wanted to go on deck, but she would not allow it. She took me to her cabin, and made me comfortable on the bunk. Then she went out and closed the door.

A short time after that I could hear the fighting drawing nearer, and realized that my uncle and the captain had been forced below, and were defending the passage. Then, suddenly, the firing ceased entirely, and all was still.

"Roland!" I heard Uncle Dick calling.

"Here, sir," I answered.

He threw open the door and entered. His clothing was in shreds, there was dirt on his face and hands, and blood mixed with the dirt. One great gash was across his forehead.

"What has happened?" I asked.

"They drove us down," he said, "and have made us prisoners."

"You mean they control the ship?"

"Yes, they command the ship. We are like rats in a trap down here."

"Where is Miss Holland?" I asked.

"They detained her on deck."

"What will they do now?"

"I don't know," he said.

Captain Hawson came into the cabin then, and he was as sorry a picture as Uncle Dick.

"We settled a few scores anyway," he said.

"But they'll make us pay dearly for it," replied Uncle Dick. "I don't care for myself—I always expected it. And I don't suppose you are afraid of death, captain. But the woman, and the boy—"

"We may be able to save them yet," the captain replied.

For several minutes nothing happened. Then a streak of light came into the passage, and there was the noise of a door slamming.

Some one is coming down," the captain said.

He opened the door cautiously and peered out. It was Welch who came along the passage, accompanied by one of the men. Captain Hawson raised his revolver.

"Stop where you are!" he commanded.

Welch laughed. "Why should I?" he asked. "There are no shells in your revolver, nor in Mr. Engle's. The fight was not so swift that I didn't take time to count the shots you fired."

"Then you made a mistake in your counting, for I have at least one left," the captain said. "I have saved it for you."

(To be continued.)

Making the Lightning Hustle.

BY CHARLTON C. ANDREWS.

THE need of an intermediate means of communication between the telegraph and the mail is a long recognized one. It has baffled organizers to give any such service that would be adequate. The special-delivery letter was one reply to the demand, but no mere acceleration of old methods could solve the problem, and organizers have had to wait for inventors to give them the materials. Many have been the attempts—all futile—until Mr. Delany came along with his wonderful invention, which he named the telepost, and by means of which an average of three thousand words a minute can be transmitted cheaply. This article is an untechnical description of the telepost and its method of working its miracle.

A System by Which Your Stenographer Can Send Your Telegrams Direct, Without the Obscurity of the Cut-a-Word and Save-a-Cent Method.

SPREAD out the morning paper so that you can comprehend at a single glance the quantity of matter in small type on the first page, which, if it is an average metropolitan daily without display advertising, will be somewhere near eight thousand words. Next look at your watch while the tiny hand at the bottom of the dial makes the circuit which marks the flight of sixty seconds, and try to imagine the entire contents of that newspaper page being transmitted from New York to Buffalo over a single wire while those sixty seconds are being ticked off. If you can do that, perhaps it may help you to appreciate the automatic telegraph system invented by Patrick B. Delany, of East Orange and Nantucket.

It may also help in appraising Delany's endeavors to bring the telegraph up to date to contrast this speed of eight thousand words a minute with nine words a minute, which is the rate at which the average speed of the average operator figures out, according to a statement made by the president of the Western Union, in April, 1907.

To be sure, what may be called the official record of Delany's automatic telegraph is only twelve hundred words a minute. Delany contents himself with a claim of a beggarly thousand words a minute when talking for publication, but the eight thousand words have been sent in one minute over a line having an artificial resistance equivalent to that in a line between Buffalo and New York. What has been done once can be done again, no doubt.

Chasing Lightning.

Even a thousand words a minute is one hundred and eleven times as fast as an average operator can send; and, be it remembered, ninety-eight and a half per cent of the telegrams transmitted in the United States to-day are sent in the same old primitive way that Morse taught.

Delany does not have to depend upon any flimsy testimony to prove that he can send messages at this incredible speed.

In the first place, he has the Elliott Cresson gold medal, conferred upon him by that venerable and distinguished scientific body, the Franklin Institute, of Philadelphia, in recognition of his achievement. He has also a report of the Committee on Science and Arts, signed by the chairman of the committee and the president and secretary of the institute, and bearing its seal certifying that the committee, after due investigation, found the apparatus capable of transmitting and receiving over a single wire twelve hundred words a minute.

Any one unwilling to accept this document as conclusive may find Delany's instruments in daily use in Boston, Lowell, Lawrence, and Haverhill, Massachusetts; Exeter, Portsmouth, and Dover, New Hampshire; Biddeford, Saco, Old Orchard, and Portland, Maine; St. Louis and Sedalia, Missouri; Springfield, Illinois, and Terre Haute, Indiana, where they may make observations and verify them on their own account to their hearts' content.

Beginning of a Revolution.

Lines now in use between these various cities are the beginning of a system which will soon reach from Boston by way of New York, Chicago, St. Louis, and Kansas City to San Francisco, and ultimately throughout the entire country; but the new company isn't saying much about its proposed routes. Like many another corporation, it has learned to its cost that the value of a right of way increases as the square of its desire to purchase.

This new telegraph company, organized with a capital of eighteen million dollars, is known as the "Telepost," because it has been the dream of Delany's life to combine the swift transmission of the ideal telegraph wire with the well-organized delivery service of the United States post-office for correspondence. Service will at all times be quick, and when desired it can be quicker.

For the quick-method messages gathered by messengers or otherwise are to be sent over the wires, to be delivered at the other end by mail. Thus handled it is a "telepost" passage. If that isn't speedy enough the message is sent by wire and delivered by messenger as a telegram. In either case the charge is a quarter, no matter whether the telepost or telegram is from New York to Trenton or New York to San Francisco. The only difference is that in a telegram the sender is restricted to twenty-five words and a very limited distance for his quarter; while if he is satisfied with a telepost he can expand his thoughts into fifty words for the money.

More for Less.

If he is willing to prepare his own message for transmission in the form of a "teletape," and let the addresses transcribe it from Morse characters, he can send a little monograph of a hundred words for the quarter. Additional words are charged for at proportional rates.

A ten-word message can be sent by wire and delivered by mail written on a postal-card for ten cents. The difference between a twenty-five word telegram from New York to San Francisco for twenty-five cents and a ten-word message for a dollar, the present rate, can be worked out by any one with a head for figures.

The first telepost line was opened between Boston and Portland, Maine, and intermediate points October 15, 1908. The service made a hit at once, and since then the system has been expanding stealthily, whenever the company could buy a place to set a pole without appearing to want to do so.

Some Foreign Usages.

France looked upon the idea and found it good. Fifty-three days after the first telepost line was opened in America the Ministry of Posts and Telegraphs announced that "letter telegrams" for transmission between any two points in France would be received at the uniform rate of a fifth of a cent per word regardless of distance, the minimum charge being ten cents. These letter telegrams are received at any time after 7 P.M. up to midnight, to be sent by telegraph during the night when the wires are nearly idle, and delivered by mail in the morning.

Rumania, too, has the craze for cheap telegrams, and lots of them. Not being

able to think of any better scheme, the Rumanian sends telegraphic visiting-cards, which are inlaid telegrams containing the sender's name and address and nothing else, that can be sent anywhere for the uniform charge of five cents. In the year ending June 30, 1908, three hundred and twenty-two thousand telegraphic visiting-cards were sent.

Millions of Dollars Spent.

Such things may do for Europe; but in America, where everybody, like a woman, wants the first word and the last, they never would meet the requirements. Although we spent $184,461,747 on telephone messages in 1907, the telephone is too slow. On a line a thousand miles long sixty words a minute is all a telephone wire will carry.

This makes five dollars for three minutes, about as low a charge as the traffic will bear, and that is too high for any but the most important messages. What is needed is a telegraph system of unlimited capacity. Such a system must necessarily be automatic.

The discovery of this need cannot be claimed by Delany. As long ago as 1846 the first automatic telegraph was invented, and millions of dollars have been spent in trying to develop the scores of automatic systems that have since been patented in every civilized nation. Yet the best that could be done in America before Delany appeared was the Barclay printing telegraph, which sends about forty words a minute, and the Rowland automatic telegraph, which sends at the same speed.

Some Foreign Systems.

The Baudot system, used to some extent in France, can send one hundred and ten words a minute. The Murray system, used on trunk lines like those between London and Dublin and Berlin and Hamburg, can send a hundred words a minute. By the Buckingham system nine thousand one hundred and twenty-six words were sent from Chicago to New York in one hour, thirty-one minutes and eighteen seconds without an error.

In another test six thousand and seventy-three words were sent over the same line in one hour and thirteen seconds. The Siemens and Halske chemical automatic system, brought out in Germany in 1904, transmitted four hundred average words a minute in a laboratory test.

The Pollak-Virag chemical automatic telegraph, in a test conducted by the Hungarian postal department, sent forty-five thousand words over a line one hundred and thirty-five miles long in one hour. In another test between Berlin and Königsberg, a distance of four hundred and forty miles, forty thousand words were sent in an hour.

The essential feature of the Delany system is the use of the perforated tape, which can be prepared by any number of operators and fed through the automatic sending-machine at a very high speed. This device, nearly as old as the telegraph itself, has been worn threadbare by the hosts of inventors who have made use of it. Yet Delany gave this hackneyed idea a new twist.

Old Ideas Simplified.

Instead of pounding the message into the tape with pile-driver blows, as is done in the Wheatstone system, still used in England, the operator writes on the Delany tape on a machine with a keyboard exactly like that of a typewriter, and he doesn't hit the keys any harder than he would those of a typewriter. Thus any typewriter girl is a ready-made telegraph operator, who can prepare messages to be sent to a telepost office ready for the transmitting machine.

At the telepost office the tape is run between some little brass wheels on the side of a polished mahogany box, about as big as an encyclopedia volume set on edge. Bits of iron wire are kept in contact with the tape by springs. These drop through the perforations, closing an electric circuit and sending an impulse over the wire.

The perforations are in a double row. Two side by side send a dot; when the two are at an angle they make a dash. A fifty-word message shoots through the machine with a "zip" while the spectator is getting ready to watch it.

At the receiving end the message is automatically recorded on another tape,

either in Morse dots and dashes or in perforations. In the former case the tape is moistened with a chemical solution. Every electric impulse brings an iron wire in contact with the wet tape, and makes an indelible blue mark which will not blur or run into its neighbors.

If the message is to be transcribed by an old-time Morse operator, he can have the tape punched, to be fed later through an auxiliary machine, which will click it off to him in the old familiar clatter at any speed he chooses, whenever he is ready, and which will stop for him to light his cigarette or repeat a word as often as he likes without a protest.

The difficulty that has tripped up so many inventors of automatic telegraphs was the "static charge," or "capacity," or "retardation." By way of explanation it may be said that sending a message over a wire is just like sending a stream of water through a long garden hose. The water does not stop and start the instant the tap is opened and closed, but in gradually increasing and decreasing gushes.

The Rebel Harnessed.

This additional current leaves a record on the receiving-tape in all other systems, and makes the message illegible. This difficulty increases with the length of the line, as the "capacity" is proportionate to the wire surface.

Delany, instead of allowing himself to be beaten by the static charge, simply harnessed it and made it help do the work of his machine, thus practically eliminating speed limits.

The scheme is covered by United States patent No. 720,004. Only dots are sent over the wire by the Delany instrument. Immediately after the dot signal is sent a reverse current is sent from the opposite pole of the battery, which neutralizes the static charge on the line so that it does not trail nor delay the succeeding signal.

If a dash is wanted the reverse current is held back long enough to allow the static charge to make a long mark on the receiving tape. Thus Delany catches this disturbing element coming and going, and keeps it so busy it never gets time to interfere with the speed.

Stimulating the Line.

As a free horse can be ridden to death, so even a static charge may be overloaded. If a long circuit has not the strength to produce a dash, condensers or a parallel circuit are introduced to help out to any extent required, so that the chemical tape may be used on lines of any length. So long as any current reaches the receiving station the tape will record it.

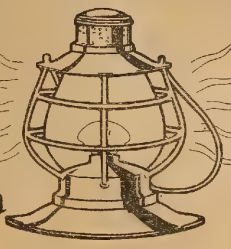
Electric and magnetic storms, bad insulation and other things that interrupt the ordinary electro-magnetic telegraph system have no terrors for Delany. His system works serenely on in perfect condition so long as it is possible to get intelligible Morse signals over it.

A newspaper that is in a hurry to get to press can run the tape right to the linotype operator and let him set up the matter right from the tape—that is, if he can read Morse. If he cannot, an attachment for the linotype, on which Delany is now working, will take perforated tape and grind out the contents in type without the intervention of a printer.

A single wire will keep eighty-two persons busy with the Delany system, forty perforating messages for transmission, forty others transcribing them by typewriter, and two attending machines.

WHAT'S THE ANSWER?

By the Light of the Lantern



Questions Answered for Railroad Men

ASK US!

WE like to be as useful to our readers as we can; but, because of the great popularity of this department, we are forced to impose certain restrictions. In future, we shall be compelled to limit its scope to the answering of questions of an informative, technical, or historical nature only.

We receive dozens of queries in regard to the right person to apply to for certain classes of employment. If the writers will pause for a moment to consider, the title of the proper official will readily occur to them, and in any case the information can be obtained by application to the headquarters of the company involved, much more quickly than we can publish it.

If a reader, after following these directions, still finds himself lacking in information, and will write us, giving his full name and postal address, we will try to satisfy him through the mail, but we cannot answer any letter in which it is not made clear that some real difficulty exists.

WOULD it be considered an emergency application if the engineer's brake-valve was put in emergency position after a service application without release and recharge, or would it be necessary to release and recharge, excepting the high speed equipment?

(2) Where is the largest locomotive in the United States, and what does it weigh?

(3) What is the weight of a Pullman sleeper?

C. T. S., Union Bay, Canada.

(1) No; with the "old style" equipment it would not be an emergency application under the conditions which you cite. A sudden reduction must be made and extend to the first quick-action triple to set them all with emergency. If the reduction is so gradual when it affects the triple that the graduating valve can let air into the brake-cylinder and reduce auxiliary pressure as fast as train-pipe pressure is reduced, it will not work the emergency on the train.

To show how light a reduction will operate the quick-action, provided it is sudden, shut the angle-cocks next to a quick-action triple valve, let the air out of the hose, couple them up again and open angle-cock suddenly. Just what air goes into the empty hose from the rear end of the train will work the quick-action. If this angle-cock is opened very slowly it will not do it.

In regard to the action of the emergency in connection with the "ET" equipment, so far as the locomotive is concerned, see answer to "J. C. C." in the November number.

(2) The largest locomotive in the world is the new Mallet articulated compound, built at the Baldwin Locomotive Works, this year, for the Southern Pacific Company. The total weight of the engine is

425,900 pounds, of which 395,150 pounds is on the driving-wheels. The total length of the engine is 56 feet 7 inches, and of the engine and tender, 83 feet 6 inches. The diameter of the high-pressure cylinder is 26 inches, and that of the low-pressure 40 inches. The total heating surface is 6,393 square feet, and the steam pressure 200 pounds per square inch. For a comparison between this engine and one of the trio of articulated compounds on the Erie Railroad, Nos. 2600, 2601, 2602, see answer to "G. D." in the October number.

(3) The weight of a modern Pullman sleeper is from 135,000 to 145,000 pounds.

W. C. A., Hinton, West Virginia.—The information which you seek relative to the course to be pursued in qualifying for the position of locomotive engineer has been given many times in this department and in the special articles which have appeared in THE RAILROAD MAN'S MAGAZINE during the past three years.

Read "The Making of an Engineer" in the August, 1907, issue; and consult this department in recent numbers of the magazine. In regard to this employment on the Cleveland, Cincinnati, Chicago and St. Louis address any of its master mechanics, or apply to Mr. W. Garstang, superintendent of motive power, Indianapolis, Indiana.

WHICH is best on a locomotive, an electric headlight or the ordinary type consuming oil?

(2) How far does an oil lamp throw a light on the track?

(3) About how many electric headlights are in use compared with oil?

H. M. K., Chicago, Ill.

(1) The electric headlight is, of course, far superior to the other from the standpoint of illumination; but, while it is in use upon many roads, it has a long way to go before being generally adopted. Two arguments operate against its use: first, because it is claimed that the powerful beam of light is extremely disagreeable to the eyes of an engineer approaching on the other track, in the instance of a double-track road.

The impression of this beam on the eyes is retained for some time, and it is said that this might give rise to a false reading of the signal lights, and you will note that electric headlights are generally encountered on single-track roads.

Second, excessive cost of maintenance. In a roundhouse where engines are all equipped with electric headlights, or even if only a dozen engines, it is necessary to carry an electrician to keep them trimmed and take proper care of the dynamo.

(2) No reliable data. Unless the reflector is in very good condition the oil light is almost valueless to the engineer behind it, so far as indicating where he is going is concerned. Its main value is to indicate to others the approach of the train or engine.

(3) There are no tabulated statistics, but at the most not more than fifteen per cent of all locomotives in this country are so equipped.

J. M. C., Milwaukee, Wisconsin.—You mention that you are to be promoted on your own road to the position of conductor, therefore the book of rules which you now hold is sufficient for all necessary instruction regarding your future routine duties. The book of rules issued by some roads embodies much detail on the subject of train orders, and if this is the case in your instance, a study of this would be of more benefit probably than what might be gained from the published matter on the subject, as your book represents the local conditions under which your future work will be done. You can, however, secure any book printed on the handling of trains, under the standard code, by addressing *Railway and Locomotive Engineering*, New York City, New York.

G. S., McGill, Nevada.—Mr. H. S. Twining is district Pullman Company superintendent in Salt Lake City, Utah.

F. T., Hastings, Nebraska.—No doubt, if your patent proves appealing, some such arrangement as you mention might be made with a patent attorney. For obvious reasons we cannot give the addresses of such firms in this department. Refer to the advertising pages of the railroad technical journals for the list.

IF you have a steam-gage under test on a Crosby testing machine, and the gage being tested shows two pounds out at 75 pounds, and correct at the allowed pressure, 160 pounds, would you certify to its being correct?

C. T. R., Richmond, Va.

It is close enough to be certified to, especially as the required boiler-pressure indication is correct. It is best when using Crosby gage-tester to add the weights, one by one, and make a record of increasing pressure to the boiler-pressure indication, and then make a record of decreasing pressure

from 160 pounds, in this case, to the zero mark. It will generally be found that when the gage you are testing is correct at zero, and also at the boiler-pressure indication, that it will vary slightly half-way between these extreme points.

G. E. T., Norfolk, Virginia.—A fireman of two or more years' experience should stand a good chance for employment under ordinary business conditions. The desire on the part of railroads is to give preference to experienced men, because all of them have had more or less trouble in breaking in green hands, the large per cent of whom will never learn. We would infer from the outlook that your section of the country should be as good as any for this employment.

K. C., Chicago, Illinois.—Apply to any division engineer.

(2) Too many division points in Idaho to quote the entire list here. The master mechanic or road foreman of engines is the proper official to whom application should be made.

(3) New firemen have their first actual experience in freight service.

A. G. C., Missouri Valley, Iowa.—Better submit your proposition to the Westinghouse Air-Brake Company, Wilmerding, Pennsylvania, and they will advise you if the scheme which you outline has any real merit.

HOW many miles from Mobile to Jackson, Tennessee?

(2) Does the Mobile and Ohio use the 4-6-0 type engine all the way from Mobile to Jackson, Tennessee, as regular freight engines? If not, what style is used?

(3) How much can be made firing on that line?

M. C. H., High Point, Texas.

(1) Three hundred and sixty-two miles.

(2) All regular freight-engines between points mentioned, 4-6-0 type.

(3) Rates of pay for firemen in through freight service, 2.52 cents per mile; passenger service, 2.08 cents per mile.

Enginemen do not run through from Mobile to Jackson, and average per month for extra men cannot be computed between these points.

H. G., Shenandoah, Pennsylvania, and G. H., Victoria, British Columbia.—Railroad police and detectives form an important adjunct to any railroad, and this department is, as a rule, well organized and thoroughly efficient, in the instance of the large lines, at least. The duties of the individual members, that is, the local detectives about yards and stations, are such as may be assigned them by their superior officers; but there is, of course, much daily routine work.

All large freight-yards must be policed to safeguard the contents of cars, and to prevent unauthorized persons from riding on passenger and freight-trains. Some of the work done by the men would rank with that of many special investigators of international reputation. Full details regarding form in which application should be made to enter this branch of the service can be secured from the general manager of any railroad.

A. S., South Bethlehem, Pennsylvania.—There is no reason why a letter properly addressed should have failed to reach the official to whom we referred you. Perhaps a communication addressed to Mr. W. E. Boland, assistant signal engineer, Southern Pacific Company, would be more productive of results. Mr. J. A. Peabody, Chicago, Illinois, looks after these matters on the Chicago and Northwestern Railroad.

G. V., Mayview, Washington.—Address Mr. S. H. Draper, general air-brake inspector, Northern Pacific Railroad, St. Paul, Minnesota.

E. L. L., Cincinnati, Ohio.—You will find many isolated telegraph stations such as you describe on the Southern Pacific and Santa Fe roads; in fact, on practically all of the far Western lines. As a rule, the prospects for employment on any of them are quite bright, and your case should be particularly to the point, your wife being also an operator. Apply to the superintendent of telegraph of either road mentioned: C. H. Gaunt, on Atchison, Topeka and Santa Fe, at Topeka, Kansas, and S. F. Rawlins, on Southern Pacific, at San Francisco, California.

A. B. D., Warren, Ohio.—Apply to J. B. Fisher, superintendent of telegraph, Pennsylvania Railroad, Broad Street Station, Philadelphia, for information desired.

HOW is the tractive force of a locomotive obtained? For instance, take an ordinary 4-4-0 type like engine 2011, N. Y., N. H. and H. R. R. Her cylinders are 15 x 24; diameter of drivers 69

inches, steam pressure 160 pounds; weight on drivers 50,000 pounds. In the classification issued by the motive power department of that road her tractive force is 12,110.

A. A. B., North Abington, Mass.

It is often desired to ascertain the amount of tractive power developed by a certain size of cylinder with a given diameter of driving-wheel, irrespective of boiler pressure. This is found by the following formula:

$$\frac{C^2 \times S}{D} = \text{Tractive power per pound mean effective pressure.}$$

In which C equals diameter of cylinder in inches, squared; S equals length of stroke in inches; and D equals diameter of driving-wheel in inches. We will now apply this to the dimensions quoted in relation to the engine in your question, and find values of formula to be:

$$\frac{(16)^2 \times 24}{69} = 89.04$$

That is, the tractive effort is 89.04 for each pound mean effective pressure. Your question gives boiler pressure at 160 pounds. The mean effective pressure is generally computed at 85 per cent of boiler pressure, which, calculated in this instance, yields 136 pounds. Therefore, $89.04 \times 136 = 12109.44$, or practically 12110 is the total tractive effort. You will thus note the close approximation between the results derived from the formula and the figures quoted by the New Haven road. To simplify the above formula to work out the total tractive effort instead of tractive effort per pound mean effective pressure:

$$\frac{C^2 \times S \times P}{D} = T$$

In which C equals diameter of cylinder in inches; S equals stroke of piston in inches; P equals main effective pressure in pounds (85 per cent boiler pressure); D equals diameter of driving-wheels in inches; T equals tractive power in pounds.

Therefore, we obtain the following:

$$\frac{256 \times 24 \times 136}{69} = 12109 \text{ tractive power.}$$

The draw-bar pull, which is frequently quoted in connection with locomotive efficiency rating is the tractive power, minus the power required to move the locomotive itself.

C. O. D., Jr., Brooklyn, New York.—The list of roads using red, or Eastlake color, for passenger equipment is too long for reproduction here. Sufficient to say, it is represented in at least seventy-five per cent of all passenger-cars.

(2) The Delaware, Lackawanna and Western Railroad is not electrified, and this project has not even been under consideration, so far as we can learn.

(3) Saginaw and Flint Railway.

(4) The Chicago address of the Pullman Company is the Pullman Building; the New York address is 15 Broad Street.

B. P. S., Hancock, Missouri.—For the different steam-whistle signals, see reply to "E. McC." in November number.

WHAT are the different kinds of coal which can be burned in locomotive or other boilers?

(2) Can you give chemical composition of petroleum, and what is the objection to its use in locomotives?

M. A. Y., Roxbury, Massachusetts.

(1) They may be separated for the sake of this reply into five varieties: (a) anthracite, which is practically pure carbon. It requires a strong draft, high temperature, and much attention. In communities where smoke is seriously objected to, it has considerable value, as it burns without flames or smoke; (b) cannel coal, containing 70 to 85 per cent carbon; (c) dry bituminous coal, containing 55 to 75 per cent carbon; (d) bituminous coking coal, containing 50 to 60 per cent carbon. All bituminous coals burn freely. They have a higher heating value than anthracite. Coke made from bituminous coal, after the volatile components of the latter have been removed, has been used for locomotive fuel with varying success. One particular reason for this use is that it is smokeless; (e) lignite, which is incomplete coal, containing 55 to 75 per cent carbon. It is not a very valuable fuel.

(2) The chemical composition of petroleum is approximately as follows:

Carbon	.847
Hydrogen	.131
Oxygen	.022
	1.000

The objections to the use of this fuel are: loss by evaporation, danger of explosion, and high price.

H. C. R., Trenton, New Jersey.—Would say that the classification or designation of the transformer depends entirely upon the number of turns in coil as placed around pole "C," in the sketch you sent. If the coil on pole "C" has more than sixty turns the sketch would indicate a "step-up

transformer"; if less than sixty turns, *vice versa*. The coils placed on pole "C" have no effect on current in pole "A," provided the winding-in coil on pole "C" is open circuited.

The voltage of the transformer is proportional to the number of turns in each coil; that is, if you had forty turns on secondary coil, the voltage would be two-thirds that of the impressed voltage in the case. The matter of ten coils placed over pole "C" should be considered as separate coils, as they will not have any effect on current in pole "A," unless, as mentioned above, the ends of the winding are connected.

IF a passenger train running at very high speed should require to be stopped at the earliest possible moment what would be the procedure of the engineer?

(2) What is the type regarded as the most modern and up-to-date passenger, and where can a chart of it be secured?

E. W. B., Murray, Ohio.

(1) Put the handle of the engineer's valve in emergency position by a clean, decisive movement and let it stay there, start the sand running, and close the throttle.

(2) The Pacific, or 4-6-2 type. Such a chart as you mention can be secured from Railway and Locomotive Engineering Publishing Company, New York, New York.

J. H. M., Mingo Junction, Ohio.—The Conway yard on Pennsylvania Railroad, just west of Pittsburgh, Pennsylvania, is the largest of which we have any record. The question of the largest roundhouse has been discussed in both this and the editorial department, and several instances cited of those claimed to contain the largest number of tracks or pits. We will include a list in this department in the next number.

E. P. M., Cedar, Wisconsin.—Write *Railway and Locomotive Engineering*, New York, N. Y., telling them the book you want, and they will secure it for you.

B. L. S., Fostoria, Ohio.—Application for the position of Pullman conductor should be made to the nearest district superintendent, which in your case would be J. E. Hill, Cleveland, Ohio, who will forward all necessary information.

J. K., Brooklyn, New York.—We would be pleased to be of assistance to you in the matter which you mention, but, as we have before mentioned, when we do hear of positions open, the information is of no value to our readers, in view of the length of time required for it to reach them.

G. W. C., Baltimore, Maryland.—Which is the larger locomotive, No. 4000 of the Southern Pacific or No. 2117 of the Baltimore and Ohio? Please describe both locomotives, as I have a heavy wager on this.

There is no comparison between the two engines. They are of a different type. The 4000 of the Southern Pacific is very much larger in every way. It is, in reality, the heaviest locomotive in the world, which you will appreciate from its total weight of 425,900 pounds, although it is exceeded in tractive effort by No. 2600, of the Erie. The following table shows the comparative sizes of the two engines:

COMPARISON BETWEEN SOUTHERN PACIFIC NO. 4000 AND BALTIMORE AND OHIO NO. 2117.

Name of road	Sou. Pac.	B. & O.	[Excess size of No. 4000 indicated by *]
Number	4000	2117	
Builder	Baldwin	Amer.	
When built	1909	1906	
Simple or compound	Compound	Simple	
Tractive effort, lbs.	94,640	35,020	*59,620
Total weight, lbs.	425,900	229,000	*196,900
Weight on drivers, lbs.	394,150	150,500	*243,650
Weight on trucks, lbs.	14,500	40,500	26,000
Weight on trailer, lbs.	17,250	38,500	21,250
Weight tender loaded, lbs.	170,100	147,000	*23,100
Wheel base, driving	39' 4"	13' 2"	*26' 2"
Wheel base, engine	56' 7"	34' 3½"	*22' 3½"
Wheel base, engine and tender	83' 6"	66' 8¾"	*17' 2¼"
Diameter of drivers	57"	74"	17"
Cylinders, number	4"	2"	*2"
Cylinders, diameter	26" x 40"	22"	*4"
Cylinders, stroke	30"	28"	*2"
Valve gear, type	Wals.	Steph.	
Steam pressure, lbs.	200	225	25
Boiler, type	Straight	Straight	
Boiler, smallest diameter	84"	72"	*12"
Boiler, height center	120"	112"	*8"
Heating surface, tubes, sq. ft.	4,941	3,234.6	*1,707
Heating surface, fire-box, sq. ft.	232	179.4	*52.8
Heating surface, total, sq. ft.	6,393	3,414	*2,979
Grate area, sq. ft.	68.4	56.24	*12
Fire-box, length	126"	108½"	*17⅞"
Fire-box, width	78¼"	75¼"	*3
Fuel, kind	Oil	Bit. Coal	
Total number fire tubes	401	276	*125
Diameter of tubes	2¼"	2¼"	
Length of tubes	21'	20'	*1"
Tender coal capacity, tons	2,850 gals.oil	15	
Tender water capacity, gals.	9,000	7,000	*2,000

WHAT is the proper side of a fire tube boiler on which to place a patch? I have read that it should be iuside, as it has the weight and pressure against it. The crack to be patched is three inches long.

J. McM., Quebec, Canada.

It would be impracticable to place the patch within the water legs of a locomotive

type boiler as ordinarily constructed. It might be applied to the inner side of the shell, on an occasion when a new fire-box was put in, but it is extremely doubtful if a good job would result.

You would of a necessity make a calking edge, and as all patches, due to peculiarities in expansion, etc., are liable to leakage, this calking edge must be accessible to repairs. So far as applying the patch to the inner side of a fire-box sheet, it would be very difficult, as it could not be introduced within the boiler leg.

A short crack which you mentioned might be satisfactorily repaired by "sewing" it together with plugs. The extreme end plugs should drill the crack out, and all plugs introduced between them should be threaded or knit into one another.

One and one-half or two threads should be left above the sheet, and then all of the plugs should be fullered or flattened down and edges trimmed and calked. In the long run, it is always best to use a patch.

A. G. R., Monclova, Mexico.—The moment the light engine is specified as the first section, or any other section of a passenger or first-class train it becomes endowed with all the rights of that train. In this case the assignment of light engine "109" as first section, abrogates the special order defining the speed which these engines must run when operating as extras or in freight service; that is, so far as this particular engine "109" is concerned.

R. S. L., Whitman, Massachusetts.—See Lantern department in THE RAILROAD MAN'S MAGAZINE for May, 1909, answer to "P. M.," Havre, Montana, for method of setting valves on locomotives equipped with Walschaert gear. In regard to setting the ordinary slide valve, see answer to "L. T. K." in the March, 1909, number. Both of the above answers referred to are quite lengthy, and space limits forbid reproduction here.

It is pretty hard to say just where the weakest point is in a locomotive-boiler. It is all designed with five as a factor of safety; that is, to withstand strains five times greater than the alloted steam pressure. There was one purposely bursted by hydraulic pressure on one occasion for a test, and it is said to have given way on one of the cylindrical courses.

This may give you some information. If you merely desire an opinion, we would think that it would let go first along the mud-ring; but the probability of any such thing occurring in any portion of the boiler is extremely remote with good inspection and proper care.

C. C. B., Abilene, Texas.—The sketch of the switch you have patented has been examined with interest, and we have consulted at least one railroad supervisor in regard to it. He has no doubt that the switch will operate as you claim, but thinks that the high rails which will be necessary will prove an obstacle to low pilots. These latter are supposed to clear the rails four inches at the heel and five inches at the point but they don't always do so.

You need have no concern in regard to the brake-beams, as they will clear. Our own opinion is that it will likely prove a rough-riding switch at high speed, if indeed high speed will be practicable over it.

Take the idea to the chief engineer of any railroad; or, failing to reach him, to any division engineer, and try to secure an expression of approval. Thereupon you should endeavor to interest some manufacturer of patent switches and crossings, whose advertisements you will find in the *Railroad Age-Gazette* and other railway technical publications.

A TROLLEY MASCOT.

"PRINCE" is said to be the only trolley dog in the United States. The emergency men of the Richmond Light and Railroad Company believe that Prince is the smartest trolley-dog in existence.

Prince was picked up by Calvin O'Brien, stationed at the company's barns at Tompkinsville, Staten Island.

The horses of the outfit and Prince seem to feel that they are fellow workers. According to the doubtless veracious newspaper report from which we take this story:

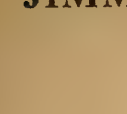
"The two horses used in the emergency wagon of the trolley company are great friends of Prince. If O'Brien asks Prince where is Paddy and Kitty, he will immediately jump off the car, run over to the stable door, stand upon his hind legs and remain in that position until the door is opened, when he will run into the stable, go over to Paddy, who will lower his head so that Prince can touch his snout with his paws, as if to say, 'All right. I am with you.'

"Kitty will do likewise. Kitty is a bay mare that was once the property of Thomas F. Ryan, the financier."

JIMMY COLLINS AND THE 442.

BY A. E. COOLEY.

When He and the Old Switcher Did One Noble Stunt He Cut Out the Booze.



O one knew just how Jimmy Collins got into Rosedale. Ask him, and he'll tell you he didn't know himself. Anyway, Big Bill Bennett found him asleep one night, after No. 4 had pulled out, outside the baggage-room door and brought him up to me.

It was a bitter cold night, the mercury was crowding the bottom of the glass.

It had been snowing for two days, the yard was full of freights, and every passenger that went out had a plow and flanger-car on ahead. We asked the crew of No. 4, when they came back the next day, if any of them had seen Collins; but, as no one seemed to recall seeing him on the train, we concluded he had come in "blind baggage" from somewhere east.

I was trainmaster at Rosedale then; and, on account of the weather and to help the despatcher out, I was staying down at the station that night. One despatcher was laid up with the fever, and when a man was sick then we had to double up and get along the best way we could.

It was just after the strike, and we were short of men. Some of the strikers we had taken back; others we had not, it seemed a good opportunity to get rid of some of the deadwood. Things had not been running as they should, for you can't have a strike and with a lot of new men keep the same schedules as with the old ones. The repair-shops were crowded to the roof, with only half a working force inside, and most of them new men at that.

Bennett brought Collins into my office. I had been sitting in at the key from six until ten, which left the other two boys with a ten-hour trick instead of eight. Davis had just relieved me, and as I went into my office Bennett came in with Collins.

We thawed him out after a time. It's pretty hard to thaw out a man full of whisky that had started to freeze, but we did it—and found he was only a boy instead of a man.

He slept on the lounge in my office that night, and the next morning hit me for a job and the price of a breakfast at the same time.

"There's no room on this division for a man who drinks," I told him. "We've too many of that kind here now."

He tried all the heads, but no one would take him on after they heard the story. No one really wants a man who drinks, and this is particularly true on the railroad. That didn't seem to feeze Collins any, for every one who turned him down for a job lent him enough money for a feed and a bed, and that kept him going until Ed Stimson finally gave him a job handling freight.

After a time Charlie Root, the yardmaster, gave him a job in the yard, and from there he got into the roundhouse, wiping. He was a railroad man, all right; we could all see that at a glance, and every time he saw Dave Sanders, the division master mechanic, he'd ask him for a place somewhere on the motive-power. His talk was all to the point—railroad a yard wide and a foot thick.

"Why, I was fed on railroad when I was a kid," he'd say. "I rode in an engine-cab instead of a go-cart, and the

only plaything I ever had was a railroad spike."

After Sanders had turned him down several times, he'd get a little mad and say to him:

"All right, Sanders; I was running an engine when you was in the ditch with a pick and shovel, and when I get up I'll put you back where you belong."

"That may be, Collins; but I've got the engine now, and you're in the ditch," Sanders would answer, "and if I was fool enough to give you an engine, I'd belong in the ditch."

He stayed wiping for six months; but, on promising Sanders to cut out the drink, he put him on firing for Adam Crosby. But what's the promise of a man that drinks? He wants to get away from it, all right; but he can't do it nine times out of ten. That was the way with Collins — he wanted to quit, but couldn't. First he used to drink on the sly, carried a bottle around on his hip; then, when he found he wasn't pulling the wool over any one's eyes, he got it openly over the bar at Bat Murphy's.

But, drunk or sober, he got down and fired his engine all day, and Crosby used to say he'd rather have Collins fire for him when he was dead drunk than any other man when he was dead sober—and Crosby was the hardest engineer to fire for on the division.

Collins lived with Mrs. McMullen and her daughter, Katie. When McMullen went down in the Cedar Flats wreck, Mrs. McMullen took a little house near the station with the money she got from his benefit and rented rooms and gave meals to a few single railroad men.

Rosedale wasn't exactly what you might call a growing town; it grew in one way—small; but that isn't the kind of growing that makes a good lively town or induces the real-estate agents to invest in trotting horses.

When the mines were opened at Paydown most of the floating population went there; only a few railroad men and storekeepers that had business there remained.

In the first place, Rosedale had only one excuse, or perhaps two, for being on the map at all. One was the railroad, and the other the river. It seemed a logical place for a division. When the road went through, the town started off with a boom; but the boom soon gave out, and left Rosedale high and dry on the desert. The people couldn't stand the sage-brush and alkali. Most of them came from where there was green grass and trees, and when they saved enough money they went home.

The road was run up the cañon of Eagle River; and at the foot of the mountains, where it turns abruptly toward the south, it is joined by Porcupine Creek. The creek flows along quietly in its narrow bed for the greater part of the year; but when the soft Chinook blows through the mountain passes, the spring sun mounts higher in the sky, and the warm rains come; then the snow melts like a stick of candy in a boy's mouth, and the Porcupine becomes a swollen, yellow torrent, overflowing the flats and lapping the very doors of Rosedale itself.

Eagle River, during countless ages, has chiseled for itself out of the soft limestone rock a deep cañon, into which the Porcupine drops with a graceful fall of sixty feet. Down the almost perpendicular walls the enterprising youth of Rosedale, during its leisure hours, has cut a series of steps leading to a bench carved out of the solid rock.

Barring Katie McMullen, it is the one beautiful thing in Rosedale.

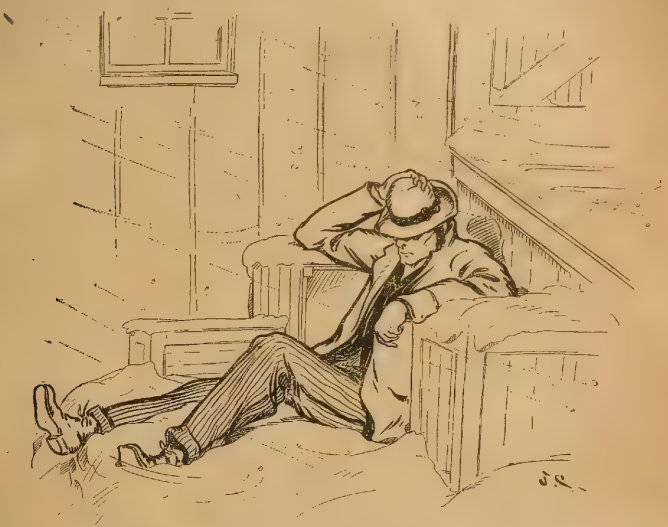
The first bridge over the Porcupine lasted six months, for it was completed late in the year. When the first spring thaws came and the snow-bound country broke loose, almost in a single night, the rushing water, carrying trees and boulders embedded in blocks of ice weighing a ton or more, came tearing down the creek with an irresistible force, and the bridge went out like a house of cards.

A heavy freight special, coming east that night, rounded the curve three hundred yards above, and thundered down the grade for a plunge into the icy waters of the creek—and took it, too.

The engineer saw the broken track, threw the air, whistled the alarm, and shouted for the fireman to jump. With the brake-shoes spitting fire from every wheel, the engine and heavy train plunged into the muddy, boiling water below.

When the water went down, a week after, we found the engineer with his hand on the throttle, his head on his arm—asleep.

But this is all changed. The Porcupine has as good a bridge over it as any on the division. When the water flows back up the mountain then this bridge will go out—perhaps.



BIG BILL BENNETT FOUND HIM ASLEEP ONE NIGHT, AFTER NO. 4 HAD PULLED OUT.

Collins, like many another good man, was his own worst enemy. His heart was in the right place, and as big as his whole body; and there wasn't a man on the division whom he couldn't call his friend. Drunk or sober, he was always good-natured; and if a yardman got pinched or a car-tink was laid up with rheumatism, he was right there with the goods.

Katie McMullen was nineteen years old then, with hair as black as an Egyptian night, a complexion as brown as a russet apple, eyes as limpid as a mountain lake, and with a figure like a Greek goddess.

Those eyes had been the undoing of almost every boy on the division who, collectively and individually, had laid themselves at her feet.

Katie had her own ideas of a wedding, however, and one by one they had given her up to find consolation, or otherwise, in some lesser light of Rosedale. It was different with Collins, though; he never gave anything up. You may call it nerve or just plain, natural, dogged persistence, or anything you like, but I've noticed that the man that gets the thing he wants is the man that camps on its trail.

Collins certainly camped on her trail; and when he'd get his check and pay his board for two weeks back and two weeks ahead, as he always did, it generally carried with it a proposal to Katie. She couldn't see it in that light, however, and Collins would have to seek consolation in Bat Murphy's fire-water.

In spite of his habits, Collins won Sanders over; and he gave him the switcher when Dan Payton had to give her up on account of blindness. She was an old tub—no one would deny that. Her many trips to the repair-shop had

left scarcely an original piece of iron in her frame, and almost always at critical places she would be sure to break something.

She steamed badly at all times, refused to work at all on some occasions, and it would break the back of any ordinary fireman to keep the steam-dial at a hundred and seventy.

Some engineers couldn't do anything with her at all; but Collins, from the first day he climbed into her cab, had an influence over her such as some people have over an animal. She did his bidding with hardly a groan of protest.

Collins was by no means a careful man at the throttle; but, somehow, he managed to escape any serious accident. A green lamp meant to him only that he should keep a sharp lookout; and with a clear track in sight he would run past a dozen horizontal semaphores, only to bring his engine up with a jerk right at the point of danger. Sanders warned him many a time about this.

"You'll do that once too often, Collins; and as sure as you break anything in this yard, back you'll go to wiping."

"You're always knocking, Sanders. Wait until I smash something, and then you can make all the row you want to."

Literally, every wind that blew that spring brought us some trouble. North, the narrow-gage, tapping the mines up Pisgah Mountain, was buried under tons of dirt and shale by a landslide. On the Caxton spur, east, there was a cloudburst above Buffalo Flats, and a quarter of a mile of track and fill went to the boneyard.

South, the trestle over Dry Sand Creek burned, tying up the main line for two days; and west, a fast freight and the Pacific Limited, our swell train, came together head on in Pulpit Cañon west of Paydown, sending two of our best engines to the scrap-heap.

To make it worse, some changes were made at headquarters at this time. A new general manager was installed, and economy was preached from the division superintendent down to the car-tinks. Economy, with the motive-power fit for the hospital and the road-bed hardly fit to run a trolley over, to say nothing of the heavy through passengers and freights.

Material for construction or repairs was not to be had, and a requisition for a steel rail took weeks instead of days to go through. Sam Higgins, the road-master, said you might as well ask for a double track through Eagle Cañon as for an extra section-gang, and we were using sweepers for firemen and hoboes for switching-crews.

The new general manager was reported to know his business down to the ground; but to us he was an unknown quantity, both as to work and appearance, for we had never seen him or heard anything about him until he came on our line.

"Some easy-chair railroad man from a swell road in the East, where they have four tracks, silver-plated telegraph-keys, and the men have nothing to do, and six men to help them do it. When he sees this division he'll wish he had stayed there," Charlie Root said.

Rumor of his coming was a daily occurrence at our division headquarters, but he seemed to be cleaning up nearer his end and did not get so far West. If what we heard was true, I guess they needed it there. Official heads had been dropping in the basket nearer home, and some of us trembled in our boots for our jobs when he should see the condition of the Red Rock division; but we did the best we could under the circumstances.

We had put some "hunkies" grading on the spur out of Paydown, in place of some Italians who had struck. They didn't have any real grievance; but a boss they had, knowing we were hard put and wanted to get the track laid, thought it would be a good opportunity to squeeze the company a little, so they went out.

The company had built a shack for the "dagoes" about two miles out of Paydown; and, as they had it and seemed disposed to keep it, we didn't have a place to put the "hunkies," so we would bring them down to Rosedale at night and run them back in the morning.

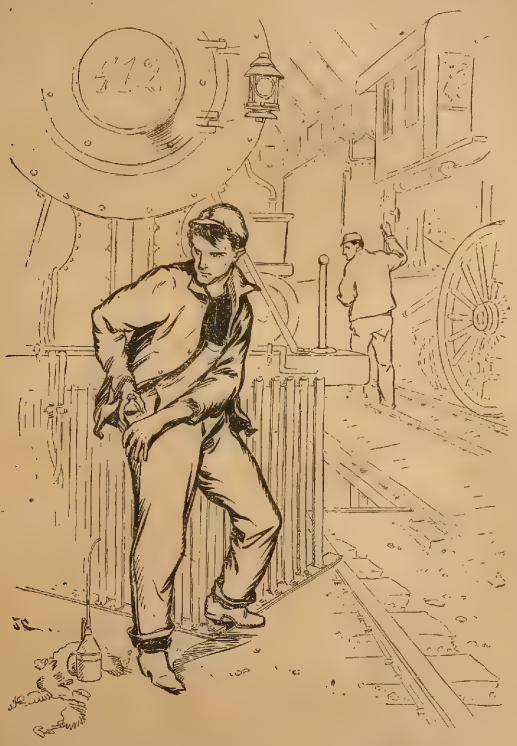
The "dagoes" had made us a little trouble; but nothing serious, and we expected to get rid of them without any disturbance.

Rosedale lies in a valley, with the

Wapiti Hills on the west and the Elk River range on the east. There is a grade down the Eagle River Cañon of something over a hundred and fifty feet to the mile. From Rosedale the road stretches away east for three miles on almost a dead level; then runs into the foot-hills of the Elk River range with the worst grade on the division, takes a little dip into Willow Park, then runs around the middle of Turtle Mountain on a track blasted out of the face of the cliff.

MacArthur was marked up that night to help a freight over the grade to Paydown and bring back the "hunkies." His fireman had reported sick that day, and Micky O'Keefe was put in to shovel the diamonds. He was a sweeper in the roundhouse, and as green a boy as ever came out of Ireland.

He knew the difference between a draw-bar and a steam-chest, and, well—that was about all. He had fired on a steam-roller in New York for six months when he first came over here; and one day, when the engineer was absent for a few moments, he backed the roller over a fire-alarm post and made a good attempt to climb into a millinery establishment by way of the plate-glass window. After that the contractor let him go, and he came out West to learn the railroad business.



HE WANTED TO QUIT, BUT COULDN'T.

MacArthur coupled on an old smoker, then used for a work-car, and helped push the freight up the grade to Paydown. The striking "dagoes," thinking they were getting the worst of it, had been rowing and worrying the "hunkies" all day; and, as they crowded into the car, glad to get away from them, the "dagoes" started to rush them.

MacArthur had stepped into the station for a few moments to see if there were any orders; and O'Keefe, thinking he would shake the "dagoes" off by pulling down the track a piece and then come back for MacArthur, opened the throttle a notch or so and latched it up.

As he did so, the leader of the "dagoes" jumped into the cab and grabbed him. They clinched, and both rolled out of the cab onto the ground. Before O'Keefe could disentangle himself and get on his feet the engine was on the grade, gaining speed with every revolution of the drivers. Some of the "hunkies," seeing what had happened, jumped, but the majority stayed in the car. There were about seventy-five left.

It was about seven o'clock and just getting dark. Root and I were in the division superintendent's office, listening to Taylor, an old miner, tell of a winter he spent in the Canadian Rockies, when a messenger entered and handed Whitney two tissues. With an exclamation, he jumped to his feet, thrust the despatches into my hand, and ran from the room. I

ALWAYS CARRIED WITH IT A PROPOSAL TO KATIE.

looked at them. One read:

> General Manager Hanchett and party, Special No. 18, leaving Caxton at 7.02 rights to Rosedale.

The other was from the operator at Paydown, and said:

> MacArthur's engine, with car of "hunkies" running wild; no one in cab. Out at 6.58.

I looked at my watch. It was just 7.05. Tossing the tissues at Root, I followed Whitney into the despatcher's office.

Roberts had the night trick then, from six until two, and he was trying to get Birchwood as I came in. That was the only station between Caxton and Rosedale where there was a night operator, and he usually left the office at seven o'clock for his supper. Whitney was standing over the sounder, his face drawn and pale as it clicked, BD, BD, BD, followed by the despatcher's call—three long dashes.

"YOU WON'T NEED THE WRECKER AND CREW."

Before we in the office had hardly realized the situation, it was known outside that a wild engine was against a special, and the boys began to file into the office. The clock ticking off the seconds seemed like hours while we waited breathlessly for an answer from Birchwood.

None came; and Roberts, with beads of perspiration standing out on his face like drops of dew on the grass, his hands shaking as with the palsy, looked from one to the other with a silent appeal in his eyes.

At this moment, Collins, fairly drunk, pushed through the crowd to the little group around the despatcher's desk, and in a loud voice asked: "What's all this excitement about?"

Some one caught him by the coat-tails and pulled him over to one side, telling him that MacArthur's engine was running wild against the general manager's special.

"Where's MacArthur's engine now?" he asked, coming over toward the desk again.

"It was out of Paydown at 6.58," Root answered, looking at his watch, "and, if she stays on the rails, she will be here in ten minutes."

"Plug the roundhouse and order an engine! Call Anderson and have him get his crew ready! Send some one for all the doctors that can be found, and then try Birchwood again!" Whitney said rapidly.

Roberts called the roundhouse captain and ordered an engine. A crew-caller was sent after Anderson, and then Roberts tried Birchwood again. "BD, BD, BD," clicked the instrument.

"II, BD," instantly came the answer, and we thought for a moment we had them cornered.

"Flag Special No. 18, quick!" Roberts fired at him with lightning speed.

Every man in the room, whether he could read the dots and dashes or not, leaned forward to get the answer. It came slowly, terribly slow; and when Roberts did get it, he uttered a groan, for the message he received was only:

> Send slower; could not get message.

"Flag Special No. 18, quick!" he sent slower, and then leaned forward, as if to help him get the red light out. After an instant's pause, Birchwood sent again.

"Special No. 18—" Then the wires went wrong, the relay spluttered in an undistinguishable mass of dots and dashes; and we, like the good railroad men we were, drew a full breath and cursed the wires at the same time.

Whether he had held Special No. 18,

or whether she had gone by, left us in a terrible state of doubt.

"Here it is," Roberts said, as the wires came right again:

> Special No. 18 went through here at 7.03.

Some one suggested throwing a switch and sending the wild engine into a string of flats that was on the siding. But to send a wild engine into a string of flats was one thing, and to send the same—plus a car-load of human beings into the empties—was quite another.

Collins's engine stood on the siding just opposite the station, with her nose to the east; the fireman was dozing on the box, and on the platform stood a truck-load of express matter.

Collins pushed through the crowd again and hurried over toward the door. As he passed through he turned his head and called over his shoulder:

"You won't need the wrecker!"

No one paid any attention to him; but I watched him as he walked unsteadily over to the truck, take two cans of machine-oil consigned to the mines at Paydown, and swing onto his engine.

Collins tried the air, opened the cylinder-cocks, pulled open the throttle with a jerk, and old 442, coughing and wheezing, pounded across the switch onto the main line.

"I FIND YOU HAVEN'T IMPROVED ANY OUT HERE."

Whitney came to and saw what had happened. He rushed out on the platform, waving his arms and shouting like a madman; but he was too late. Collins and his engine were several hundred yards down the stretch, and, as we filed out after Whitney, his tail-lights disappeared around the curve.

"Collins is either drunk or crazy—most likely both," said Root.

The wind brought the faint roar of MacArthur's engine coming down the gorge, and we all turned our eyes to catch the first glimpse of her. As she poked her nose through the granite walls, Whitney turned around. He made for

the switch target, a couple of hundred feet up the platform. He unlocked the switch as the train came into full view. Raising the bar, he hesitated; then let it drop, and came running toward us.

"I couldn't do it," he said. "They will have to take their chances on the grade."

With a rush of wind and whirling alkali-dust, the engine flew by us at a mile-a-minute clip and disappeared down the track after Collins.

The engine, with the derrick and wrecking-car, puffed up to the platform on a side-track, and the men began to pile in the tools. Whitney waited ten minutes, and was just swinging on, ready to give the signal to pull out, when we heard a long, loud whistle from the east.

"That's 442! I'll bet my life on it!" Whitney said, swinging down and giving orders for the main-line switch to be reset. The whistle sounded again, a headlight appeared around the curve; and Collins, his head out of the cab-window, the whistle tooting, pushing MacArthur's engine and the car of "hunkies," pulled into the station.

"Give me the roundhouse track!" he shouted as he sped by.

Whitney gave the orders for the switch, and just then another whistle sounded from the east. In two minutes more, Special No. 18 pulled in.

As the engineer swung down from his cab, he said to me:

"There's something wrong with the track just this side of Summit Cut. I put on the air there for the grade, and we slid along for a hundred yards or more."

Two hours earlier every railroad man in Rosedale would have wanted to see the general manager; but two hours had passed, and every man wanted to see Jimmy Collins — but he had disappeared. His fireman, Patsy Connors, was coming down from the roundhouse, though, surrounded by an admiring group of yardmen, wipers, and brakemen. As I joined them, Connors was saying:

"When Collins came aboard I thought he had some orders. I didn't know nothing about the wild engine. He pulled like mad up to the twelve-mile post. I never thought 442 would stand the pace.

"Right on the worst of the Elk River grade he pulled up, and said: 'Patsy, the 1016 is running wild behind us with the car-load of "hunkies." Take this can of oil and some waste and soap the track good for a hundred yards.'

"He took one rail and me the other; and if a fly had lit on that track for a hundred yards, he'd have broken his neck.

"Jimmy pulled up for a couple of hundred yards and walked back to where I was, to wait for the 1016. We didn't have long to wait. She took the grade, blowing and puffing like a porpoise, and as soon as she hit that oil her drivers spun like a dollar on Bat Murphy's bar. Collins climbed aboard and choked the steam, and hollered:

"'She's all right, Patsy; but a little short of water! Draw the fire, and I'll come down for you! Hustle now, for the general manager is coming west—special—and ought to be along here!'"

Whitney was explaining it all to General Manager Hanchett in the office.

"Collins, did you say his name was? Jimmy Collins—red-headed and has a mole on his face? I think I know him. Send for him to come up."

A caller found Jimmy in Murphy's.

"Well, Collins," said Hanchett, "I guess you remember me? This is the second time you have saved me from a smash-up. You remember the other time back on the C. and R.? I had to discharge you afterward for drinking; and I find you haven't improved any out here, so I'll have to do it again. You can get your time right now."

Collins never said a word, and started for the door.

"Just a moment, Collins," Hanchett said, holding out his hand. "I told you we couldn't have a man on this line that drinks, and I meant it. But we can't afford to lose a man like you, either. You come around in the morning, and Mr. Whitney will give you an engine; of course, you will have to tell him you are a teetotaler. No pledge or anything like that, just your word."

Collins was too much astonished to thank him. He backed out of the room, bowing and twirling his cap in his hands.

Three months after Jimmy married Katie McMullen. And he kept his word.

Fighting the Ticket-Scalpers.

BY H. A. KOACH,
Assistant Chairman, Railway Ticket Protective Bureau.

IT is an axiom in law and philosophy that a matter is never settled until it is settled right. The ticket-scalpers won many temporary victories, and their dealings in corruption of employees and legislative fights were not always unsuccessful, but the end was certain. The incorruptible court that represents the last word of the nation could not be hoodwinked into perpetuating a "business" whose main asset was brazen dishonesty, and the only thing left for wonder is the audacity which would make the United States Supreme Court a court of appeal to protect unscrupulousness.

The Unrelenting Industry of the Railway Ticket Protective Bureau Brings About the Waterloo of a Parasitic and Fraudulent Business.

THIRD ARTICLE.

WHILE it took considerable time to educate the public conscience to the cupidity of the scalpers, the constant and repeated arrests and the exposing of their methods resulted in a rapidly waning public confidence. The public mind was shocked when it began to realize that transactions with ticket-scalpers involved participation to a greater or less degree in frauds upon railroads.

Reputable commercial houses were enlightened as to the unlawful practises of the scalpers, and they no longer regarded them as conducting honest business. Numerous firms, who formerly sent their traveling men to scalpers' offices to purchase railway transportation, withdrew their patronage.

The activities of the Ticket Protective Bureau were called upon in many instances to aid in the detection of scalpers who were known to have corrupted clerks and other employees of the membership lines, this being one of the most serious menaces to the railways.

Painstaking Corruption.

The scalper made himself known to each individual with whom his customer came in contact. The ticket-clerk, the station and baggage agent, the gateman, the conductor—even the trainmen and newsboys—were well known to him, and were often under personal obligations to him for drinks, cigars, loans of money, and payments for services, past and future.

Once he had gained a foothold, his power over them was complete, and he required of them the most devoted and profitable servitude.

The fear of detection and denunciation kept them his tools and accomplices in robbing the companies who paid their

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salaries. In this way the tickets which he manipulated often safely passed the hands of those who should have been the first to detect the frauds.

Many promising careers of young railroad employees were ruined by their acquaintance with these scalpers. Only recently a former railway employee was convicted of the robbery of a number of railroad stations. After his conviction he admitted to the writer that the suggestion to rob these stations first came from a scalper, who promised him rich rewards for the tickets secured in this manner.

A Try-On That Missed.

Through the sources of information possessed by the bureau, these stolen tickets were recovered from the scalper in question and returned to the railroad from which they were stolen. The young man who committed the robbery was sentenced to an indeterminate sentence of from ten to twenty years in the penitentiary.

Not long ago a conductor with whom I was riding told me of an experience he had about two years ago, when one of the scalpers called on him and offered to pay him one dollar for each ticket he would pass, without questioning the passenger holding it, stating that he would mark the ticket in such a way that the conductor would know it came from his office.

After listening quietly to the scheme, the conductor asked the scalper which window he would prefer to be thrown from, and promptly reported the overtures made him to his superior officers. It is to be regretted that many employees did not have this sense of loyalty, but listened to the siren song of "easy money," only to be exposed by the very men with whom they were in collusion when it was to their advantage so to do.

Giving the Countersigns.

That their patrons should carry proper means of identification, in case they were questioned by conductors, was an important item with the scalpers, and they went to considerable expense and trouble in providing such identification. They would send to each other through the mails envelopes addressed lightly in lead-pencil. This original address would be erased and the name desired would be substituted in ink.

The passenger, on being questioned by the conductor, would pull out a number of these envelopes purporting to contain letters received by him from various parts of the country as proof that he was the party in question, or present fake business-cards which had been printed by the scalper. After they had passed the scrutiny of the conductor, they would be returned to the scalper, who would send them out with the next passenger in the same way.

It was generally believed by the railroads that the introduction of what was known as "safety paper" for their tickets would solve the problem and prevent alterations. While it is true that this safety paper could not be purchased excepting at printing-offices authorized by the railroad lines, it was not proof against manipulation by acids or erasures, and it could easily be recolored. Its only safety was that it could not be purchased and used by unauthorized persons, hence no complete issue of forged tickets could be placed on the market.

More recently, however, after considerable time and expense had been incurred in experiments, a more reliable safety paper has been manufactured and adopted by the railway lines, which will aid considerably in preventing alteration of tickets by acids and erasures.

Cumbersome Preventives.

The introduction of what was known as iron-clad signature form of tickets, non-transferable, requiring the original purchaser to re-sign the ticket in the presence of the agent before the ticket could be used for the return journey, and the validation of these tickets by the railroad agent, was also believed to be a protective feature which would prevent the tickets from falling into the hands of the scalpers.

But these validating offices not only incurred an expense to the railroads, but considerable annoyance to the traveling public, and did not prevent the scalpers from dealing in this form of tickets.

Facsimile validation stamps, agents' signatures, punches, and all the paraphernalia used by the regular validating agents, were promptly duplicated by the scalpers; and the validation of tickets, when needed, was easily accomplished with the aid of this forged outfit.

Even when the validation stamps were changed daily by the railroads, pace was kept by the scalper with forged stamps; and it was customary for many of them to employ an engraver, who went from city to city, working solely for these crooks, making such stamps.

Indefatigable Crooks.

With a few simple tools—such as carbon-paper for tracing, fine pens, and regular printers' ink—the printing, and even the validation stamps on a ticket, could be perfectly imitated, and the alterations became an art in fine pen-and-ink work and careful tracing on the part of the scalpers.

It became an incessant, continual daily battle between the railroad agents and the scalpers; and as quick as a new safety device was found by the railroads, a new method of overcoming it was invented by the scalpers.

To guard against successful search of their offices when raids were made, the scalpers changed their methods, and would not permit the alteration of tickets on their own premises, securing rooms in near-by hotels where the work was done, or having rooms directly over their ticket-offices, to which entrance could be gained only through a trap-door by means of a ladder which could be pulled up.

Tickets Fixed to Order.

In these rooms, which were connected with the regular scalping-office by private telephone, tickets were "fixed" to order. When a customer wished to purchase a ticket the proprietor or clerk would step to his telephone and ostensibly call up the railroad company over whose road the passenger wished to travel, requesting that a ticket by that line be sent to his office in time, say, for the five o'clock train.

Of course, the unsuspecting passenger believed that the transaction was straight and would pay his money, being asked to return for his ticket about four-thirty. In the meantime, the "fixer" in the upper room would prepare a ticket which would be delivered when called for, and which, of course, was forged or altered to suit the case.

Relied on Human Nature.

About all the dishonest scalper cared for was to get the ticket fixed so it would pass inspection at the gate and permit the holder to board the train, not caring if the deception was discovered later and the passenger forced to pay full fare or be put off the train. Usually the man or woman who buys a ticket from a scalper and gets into trouble never comes back.

Country publications were religiously canvassed for editorial transportation, by means of circular letters, which is better explained by the letter below, sent out by a well-known Chicago scalper. I cannot resist the temptation of giving one vigorous reply received from the editor of a Texas publication.

Paying for Passes.

The scalper's communication read as follows, capitals and underscoring being given exactly as in the original:

DEAR SIR:

We take this liberty of addressing you under the impression that you have some *Editorial Transportation to dispose of.*

We are credited with paying the *highest market prices* for this class of stock, and having a large patronage of first-class people accustomed to the using of same, we are in a position to *handle any amount.*

It might be well to add that *our past experience* with Editorial Mileage and Trip Tickets has been a *very successful one.* This is due to the fact that we are very *conservative* and *precautious* in disposing of same, as we never sell to any but *persons known to us.*

Should you have any mileage, Trip Tickets or Transportation of any nature, or are in a position to procure any, *communicate with Us and We Will offer you liberally and promptly.*

We have been established since "1872," and *all transactions of* above nature rest assured will be *strictly confidential.* Yours respectfully.

The Editor's Wrath.

The reply to which I refer was as follows:

SIRS:

I have your letter September 9.

You are evidently laboring under a misapprehension.

This is a journal of opinion and a legitimate publication. It does not fake its business. Nor does it invite communication with fakers.

I do not know why you should have invited us to enter into partnership with you in an effort to rob the railroad companies, for if we have ever missed an opportunity to hold your business up to the contempt of the honest public we sincerely regret having done so.

I note with some regret your statement that "your past experience with editorial mileage and trip tickets has been a very successful one." If this statement be true I am forced to the conclusion that there are as big scoundrels in the newspaper business as in yours.

In the hopes that the above statements are sufficiently explicit to penetrate even your understanding, I am,

Very truly yours.

No Compromise.

After a careful study and investigation of the situation, the executive board of the Railway Ticket Protective Bureau came to the conclusion that there was but one means of protection from the impositions practised by the scalpers, and that was their absolute elimination.

All other preventative measures were found to be simply palliative. If these scalpers who so adroitly pandered to the public prejudice, who solicited and incited betrayal of trust on the part of railway employees, and who seemed to be able to obtain the cooperation of a considerable percentage of the traveling public in the consummation of their impositions upon the railways, were driven from their illegitimate vocation, there would be no necessity for applying protective measures to the tickets.

The bureau was, therefore, obliged to wage warfare against the entire business of ticket-scalping, believing with the Interstate Commerce Commission, who investigated the business of ticket brokers through a commission appointed in 1890, and who stated their conclusions in their annual report for that year, as follows:

The Official Fraud.

> In whatever aspect ticket-scalping may be viewed, it is fraudulent alike in its conception and in its operation. . . . Fraud, therefore, is the incentive to the business. . . . One might suppose that a practise of this character could no more be defended than larceny or forgery, but, strange as it may appear, it is defended before legislative bodies and elsewhere, and the right to carry it on unmolested is demanded.

The bureau has been effectual in securing temporary restraining orders in State and Federal courts, prohibiting the scalpers from dealing in all non-transferable tickets issued at less than tariff rates on the occasion of some special gathering, such as the meeting of the Grand Army of the Republic and similar affairs.

These restraining orders were followed by applications in both State and Federal courts for permanent injunctions, and whenever they have been granted it has practically eliminated the ticket-scalper, making his business so unprofitable that he has been obliged to abandon the field in a large measure.

Check Two.

Antiscalping laws were passed by a number of States through the efforts of the bureau, among them being the State of Oregon. Notwithstanding this, a number of scalpers endeavored to open ticket-scalping offices in Portland during the Lewis and Clarke Exposition in 1906.

The usual tactics were followed by the scalpers when the bureau inaugurated an aggressive campaign against them. They questioned the constitutionality of the antiscalping law. In his decision Circuit Judge Frazer not only declared that the antiscalping law represented a due and proper exercise of the constitu-

tional authority of the State, but commended the measure as justly and wisely interdicting an illegitimate business.

The advertising columns of the daily papers in many of the larger cities are still used by them as a means of buying stock and selling tickets. A few offices are conducted openly in conjunction with other lines of business, the claim being made by the scalper that he does not handle any tickets which have been enjoined by law, and nothing but such full-fare tickets as the railroads commonly issue.

Mate in Two Moves.

Applications for perpetual injunctions which were broad enough to include all non-transferable tickets sold at reduced rates, for all time, were hotly contested by the scalpers. They admitted that temporary injunctions covering only tickets issued for a certain event could be secured, and that they would not contest such injunctions. This, however, would have necessitated the railroads applying for injunctions daily.

Many of the district courts were satisfied to grant these permanent injunctions, but the entire question was finally brought to a hearing before the United States Supreme Court by the scalpers themselves in a suit which was instituted against one Bitterman and other scalpers in New Orleans, enjoining them from dealing in non-transferable reduced-fare passenger tickets.

Checkmate.

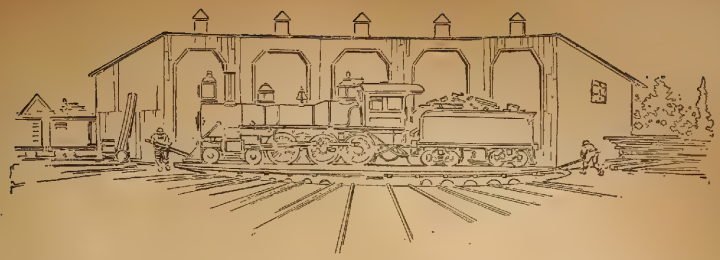
The United States Circuit Court for the eastern district of Louisiana decided that, while the practise was wrong, legal relief could be secured by a separate action for every unlawful sale. The case was taken to the United States Circuit Court of Appeals, its decision was favorable to the railroads, the court holding that the wrong-doing was of a continuous nature and granting a permanent injunction. The scalpers then appealed the case to the United States Supreme Court, which was unanimous in sustaining the decision of the United States Circuit Court of Appeals.

The New York *Commercial* commented on this decision in an editorial, from which the following is quoted:

> This ends one of the most vigorously fought—one might almost say viciously fought—legal battles in the history of American transportation, and it is a complete and crowning victory for the railroad companies. It is one, also, in which the vast majority of the public will share the satisfaction of the railroads, albeit there is an almost universal disposition to buy any commodity "in the cheapest market" and the eyes of the average man or woman are easily and conveniently closed at the moment to any immorality involved in accepting transportation from a carrier in return for a ticket improperly acquired, still the average of humankind has a keen perception of exact justice, and will not defend or commend this practice in the abstract; and most travelers on American lines will at least be heartily glad that the standing temptation to them to "beat the railroads" has at last been removed. As "no man e'er felt the halter draw, with good opinion of the law," it will only be the scalpers themselves who will protest that their rights have been trodden upon, and that the "great and powerful corporations" have beaten them to a standstill.
>
> This decision means, practically, that a "scalped" railroad passenger ticket is still the property of the original seller. The "scalper" consequently has no rights, no standing, no business in any court—state, territorial, or federal. The whole army of them will have to go out of business; in fact, a business that they have built up to enormous proportions, its ramifications being through every nook and corner of the country, and its conduct entailing corresponding enormous losses on the railroad companies.
>
> The decision frees the transportation business of a huge parasite that has been feeding on its vitals—its passenger receipts—for years and years, and rids it forever of an irritating and burdensome class of litigation which consistency, commercial judgment, and self-respect, compelled the companies to continually carry on. A business that finally "wins out" in a contest carried on with such tremendous odds against it is entitled to the sincere congratulation of every other class and form of enterprise similarly subject to predatory assault.

The courts, like the mills of the gods, may grind slowly, but, in the end, the grist is generally good, sound justice.

(The end.)



Spending a Railroad's Money.

BY T. S. DAYTON.

A DIGNIFIED, serious, hard-to-reach man—that, in brief, is a good description of the treasurer of a great railroad system. His multitudinous duties—collecting revenue from a hundred different points to sending out $200,000 a day on the pay-car—give him a prestige enjoyed by no other official.

Every young man entering the railroad business likes to get into the treasurer's office. If he "makes good," the chances are that he will work up the ladder and get "fixed" for life, for the positions are filled by systematic promotion. Three great elements are required, however—honesty, ability, and—more honesty.

The Sources from Which a Railroad Corporation Receives Its Money. How It Is Collected, Kept Safe, and Paid Out, and the Men Responsible for It.

FIGURES and facts shall be the background of this article. The treasuries of the railroads of this country received during the year 1907, $2,731,000,000. When the year's books were closed, there remained of this vast sum $173,000,000 as a surplus to be divided among shareholders or to be used for future needs. The rest had been paid out for wages, supplies, materials, interest dividends, improvements, and a number of smaller items.

I mention the year 1907, because it is the latest for available statistics.

The sources from which this money comes, how it is taken care of before it is paid out, and what becomes of it, are among the most interesting but least known about things—popularly speaking—connected with the gigantic business of railroading.

The traffic receipts of a railroad are fully 95 per cent of its income. In 1907, the total traffic revenue was $2,602,757,503. Of this amount the transportation of freight brought in more than two-thirds, $1,825,061,858; and of passengers, $574,718,578.

In addition to these, there were miscellaneous traffic earnings from carrying

the mails, express matter, etc., amounting to $202,977,067. The income of the railroads from all other sources was but $128,015,081—less than five per cent of the total.

A railroad collects its pay from the public, for services rendered, through its station-agents. If it is for carrying freight, the receipt it gives is generally in the form of an expense bill; if it is for the transportation of a passenger, it is a ticket. These collections are almost invariably made in cash. When a firm or individual is in receipt of considerable quantities of freight at regular intervals, an agent may be authorized to accept the consignee's checks, and to balance accounts weekly or monthly.

At a certain time each day the agent closes his books and "makes up" his remittance. He gathers all the cash and checks that he has received since the previous day, retaining only the amount of currency he is authorized to keep on hand for the transaction of business. On his remittance-slip, which he sends with the money, he lists the totals of currency—bills, coin, and checks.

He places this remittance in a heavy manila envelope especially designed for the purpose, and after cording and sealing it, in accordance with certain established rules, he delivers it to the express messenger, for transmission to the treasurer of his road, or to some bank to which he has been directed to remit. In the latter case, he forwards the treasurer a duplicate of his remittance-slip.

Collected by Banks.

Within the last three or four years, especially on many of the larger lines, the volume of money that is sent direct to treasurers has been decreased over two-thirds, and the labors of the treasurers' offices correspondingly lessened, by having all agents and others, regularly receiving money at points on the road, send their funds each day direct to one or more designated banks.

Before this custom was inaugurated, the money flowed in from all points on the line to the treasurer's office. It took, approximately, on any large road, a dozen heavily bonded clerks, at $75 each a month, to check up these remittances, count the money, and make the proper entries.

The custom of having the agents and others remit direct to one or more banks in a financial center usually saves a railroad over $10,000 a year. The banks are only too glad to swell their average daily balances by several hundreds of thousands of dollars, and even to pay interest on the deposits, besides assuming the extra labor of taking care of the hundreds of daily remittances. The banks acknowledge receipt of the money direct to the agents, also sending a duplicate slip to the cashier's department of the treasurer's office.

Small Part in Cash.

This decrease in the volume of actual money that the treasurer's office handles from station-agents may be better appreciated by stating that the New York Central's traffic receipts average about $600,000 a day. Over $400,000 of this comes in from the stations and goes direct to the banks. The other $200,000 is in checks. A good many of them are in settlement of freight and passenger balances from other roads, trackage, rentals, etc. A very small portion of this $200,000 is in cash.

Traffic balances are caused in this way: The New York Central, for instance, receives a freight shipment whose ultimate destination is Denver. On the arrival of the merchandise at Denver, the freight is paid by the consignee to the road making delivery to him.

Each road which has had a part in transporting the shipment is entitled to its proportion of the total amount collected, this division of earnings being fixed by mutual agreement. On the other hand, freight originating at Denver is also simultaneously being transported to New York and being collected by the New York Central.

With passengers, the line selling the ticket is the one that receives the revenue. At the end of each month, each road renders a statement of amounts collected from through freight and passenger traffic, with a division of the earnings shown thereon. These statements are checked against each other, and it is ascertained exactly what balances are due.

The same plan, generally speaking, is followed in car rentals. When an empty car passes off the rails of the road that owns it to those of another line, the road that has possession of it has to pay a certain specified rental every twenty-four hours that it is off its own tracks.

As empty cars are in transit continually, the balances in this account are also struck monthly and settled by checks.

Another traffic source of revenue is from the rental of trackage rights or other facilities to other lines. Some of these leases bring in considerable sums, but they are comparatively insignificant when compared with the aggregate receipts.

Revenue from Waste.

Such are the principal traffic sources of revenue. The income from other directions — about five per cent of the whole, as has been stated—is made up of odds and ends. The sale of scrap is one of these. Every railroad accumulates large quantities of worn-out and useless material—mostly metals—which is sold periodically. Some of the great systems receive over $2,000,000 a year from this source.

The money derived by the railroads from the sale of their capital stock and from bond issues is not a current income, and therefore cannot be included in their revenues. Such funds, however, come into the custody of the treasurer, like all others. They are always used for some specific purpose, such as the building of new lines, permanent improvements, renewals of rolling stock, etc.

Their amount varies from year to year. The total capital stock of the American railways in 1907 was nearly $7,500,000,000, and their bonded indebtedness a little over $9,000,000,000.

The last few years the average increase in capitalization has been about $350,000,000. The bonded debts of all the railways in this country was $1,192,178,506 larger in 1907 than the year previous. During the nine years before that, the average annual increase in bonded indebtedness was $271,263,000.

A railroad's income is principally derived, as has been shown, from one great source: traffic. Its outgo is in many and varied directions, whose ultimate object is to adequately take care of its business.

In 1907 there were 1,675,000 people employed by 350 railroads of America. They received in wages that year $1,075,000,000, or about forty per cent of all the money that the railroads received. The average daily wages for all classes of workmen and employees was $2.20.

The next greatest item of expense was for materials and supplies. This amounted to about $860,000,000. The remainder, after taking out the $173,000,000 surplus, amounted to nearly $789,000,000. Of this amount there was paid in interest on bonds $280,931,001, other interest $23,759,329, dividends $247,258,219. Taxes took $74,253,245, rentals of all sorts $87,403,236, and miscellaneous expenditures $75,176,725.

These figures do not include the purchases of new rolling stock or all betterments in track or other permanencies. They do include, however, the maintenance of the properties and all that pertains thereto. How these various disbursements are made may be best described by outlining the organization and duties of the treasurer's department of a large railroad.

The head of this department is the person who is finally responsible for receiving, caring for, and disbursing all of a railroad's money. He is the chief financial officer, generally one of the vice-presidents, and also a member of the board of directors or even of the executive committee. He usually ranks next to the president.

Treasurer Not a "Railroader."

He may be the direct representative of some person or group of persons who have a large or a controlling interest in the road. It is generally recognized that an able financier in the treasurer's chair can do quite as much as any other officer toward insuring a road's prosperity. Therefore, a treasurer is frequently selected more for his experience and ability in this line, which he may have achieved in banking circles, than for his familiarity with railroad routine.

In fact, he is the only executive who

need not be a "railroader." His salary ranges from $5,000 to $20,000 a year, according to the importance of the line or the system.

A treasurer does no routine work himself. He does not hold himself aloof from the public; but he sees only a few people, and those on business of moment. He has less callers than any other official.

It is a treasurer's task to plan so that every contingency of the financial future can be met adequately and at once, in good times and in bad. In a word, he must keep the road's finances so that every debt can be paid the moment it falls due.

Interest on Bonds.

As fast as the money comes in it must be deposited where it will be safe and immediately available when needed. It must be placed where it will be earning the highest practicable rate of interest. The huge average daily balances of the railroads with the banks are like great call loans with such institutions, and are very desirable on both sides.

It was the treasurer of an eastern road who first devised and put into practise the plan of having the station-agents remit directly to the banks, thus accomplishing two things that do not seem to amount to much, but which really mean a good many thousands a year in the aggregate. One is cutting down expenses, and the other is gaining a day's interest on a large sum of money, say $600,000, at two per cent a year.

Another important part of a treasurer's work is regulating judiciously the disbursement of funds. A considerable portion of the gross monthly receipts is not always available. Some is in transit, some is liable to be called for unexpectedly on large contracts that are being completed, and so on.

A treasurer has to keep a firm grasp on the situation, and not only provide out of current receipts for the payment of wages and sundry bills, but also to be ready to meet the interest on bonds or to pay the dividends on stocks whenever they fall due.

The interest on a railroad's bonds has to be paid either every six months or annually. The amount of this periodical disbursement is known exactly, and funds must be provided for it no matter what happens. Failure to pay this interest is looked upon as a confession of insolvency and is usually followed by foreclosure on the part of the bondholders and the appointment of a receiver.

While these interest payments amount to only about one-tenth of the gross revenue of the average road, the other payments for wages, supplies, material, equipment, and a thousand and one other things are so large that they have to be carefully looked after and watched over so that sufficient funds shall always remain to meet the interest when it falls due.

No important expenditure is even contemplated without first consulting with the treasurer and being assured that the money will be available. With many roads a portion of the revenue must be set aside in what is called a sinking fund, out of which a certain number of bonds must be paid each year.

Needs a Keen Mind.

This is another burden in addition to the annual interest charge. When money has to be raised by the sale of bonds or stock, it is one of the duties of the treasurer—in conjunction with the board of directors or the president—to negotiate the loans the bonds represent for the length of time that may be necessary.

His is also the hand on the helm when stock is to be sold, and upon his astuteness depends, in a great degree, its realizing the proper market-price.

The treasurer and his assistants and their subordinates dwell continually in the midst of alarms lest some mishap befall the interests that they must safeguard conscientiously. From the highest to the lowest, they are beset with the vexations and worries that are the portion of every man who is directly or indirectly the custodian of another's money.

Yet, curiously enough, in no other department of a railway is there so much eagerness to gain a foothold of employment and so few resignations. The men who enter the treasurer's department as

youths almost invariably continue there until they die or are retired as pensioners after long and faithful service.

On a big railroad the assistant treasurer is the one who handles, personally and through his large staff of subordinates, the tremendous volume of detail work. In the organization of the New York Central's treasury department, which is typical of the high development that has been attained in that branch of a great railroad, the assistant treasurer has five departments under him.

The first is the voucher department, where payments that have been authorized are made. The second is the stock and bond department, where all the work connected with the transfers of stock, the payment of dividends, the issuance of bonds, and the payment of interest is taken care of. The third is the cashier's department, where all money not transmitted direct to the banks is received. The fourth is the paymaster's department, which concerns itself with the payment of wages. The fifth is the general clerical staff of the treasurer's department.

Relatively speaking, a big railroad like the Central sends out very few checks. Instead, it makes its payments by means of vouchers. These documents, briefly described, show on their face for what purpose the payment is to be made and to whom. On the back, for purposes of distribution on the books of account, is shown the heading under which it is to be charged.

Sends Out Few Checks.

These vouchers are signed, countersigned, and approved by the various heads of departments whose activities they touch; and when they reach the assistant treasurer, they lack only his final approval before being changed into paper that may be transmuted into cash. After a voucher has been recorded, examined, and approved by the assistant treasurer and his staff, that official stamps it with an order on the bank, authorizing that institution to pay to the person in whose favor the voucher is issued, or to his order, the amount named therein.

In this way the voucher does not return to the treasurer's department of the railroad until it has been paid, and then it is an absolutely complete record of the transaction to its conclusion and is ready for file with the voucher department. The object of paying by voucher, instead of by check and voucher combined, is obvious. It saves a great deal of time, and the voucher is sure to be returned duly receipted.

So vast and complicated are the transactions of the treasurer's office, and so essential is it that every transaction must be absolutely complete, that effort toward attaining these ends by the simplest means and with the expenditure of the least time is continually being made. This voucher-payment system is coming into general use throughout the country.

Paying the Bills.

A large portion of the money disbursed through these vouchers is for the regular running expenses and maintenance of the road, which, in the ordinary course of events, are paid out of its earnings. The current supplies that a railroad needs each month run into millions. The maintenance of property, according to Kirkman's "Science of Railways," is 38.62 per cent of all other operating expenses. The locomotives alone represent an investment of nearly $700,000,000, the passenger-cars nearly half that amount, and the freight-cars three times that sum.

Even the battered work-cars total up over $50,000,000. Half a billion dollars is invested in ties alone, and nearly a billion and a quarter in rails. Every item of roadbed, right of way, and rolling stock has to be kept in thorough repair. It all wears out and has to be renewed sooner or later.

The locomotive repair bills alone are a big item. The Union Pacific had 1,088 engines last year on all its lines. During the twelvemonth ending June 30, 1908, it cost to keep them in running order $3,221,699.41, which is rather below than above the average expenditure per engine. The coal that these engines consumed cost $6,587,582.87, but they helped earn a revenue by hauling freight and passengers that amounted to about $53,000,000.

As an evidence of ownership, every stockholder receives what is called a stock-certificate. This document certifies that he is the owner of so many shares of such and such a kind of stock. These certificates are inscribed with the name of the owner. His name and address are entered in the stock-record books, where every change in ownership is also set down.

Whenever a certificate is transferred, the old one is taken up and canceled and a new one issued. Under ordinary circumstances, on a road like the New York Central, whose stock is held largely as a permanent investment, the new certificates average between fifty and one hundred a day, although around June 30 and December 31 the number increases to nearly a thousand daily. On roads whose stock is very actively traded in on the exchanges, the number of certificates issued daily is far greater.

When stock dividends are payable, checks have to be sent to the stockholders of record on the date on which the books close. This also is a huge task, involving in some companies like the Pennsylvania, for instance, the making out, signing, and mailing of between forty and fifty thousand checks.

Transferring Stock.

Every certificate that comes in for transfer has to be carefully scrutinized. While forged or spurious certificates are rare, they are not unknown and must be guarded against. The same is true in regard to the payment of bonds at their maturity or retirement.

When the interest on a bond falls due, the claim for the money is made by the presentation of a coupon. This is a bit of paper about twice the size of a postage-stamp. The number of these attached to each bond corresponds with the total number of interest-payments between the issue of the bond and its maturity.

On each interest date one of these is detached and presented at the treasurer's office. After being verified and checked off, it is paid either by currency or by check.

On the days when interest is due, a line of bank-runners rush up to the cashier's window and toss in bundles of coupons, worth perhaps $100,000 or more, ticketed with the name of their owners. They hurry on without an instant's delay, to return for their checks after the coupons have been counted.

The actual currency and checks received are handled in the cashier's department. The checks that are sent out are issued from that department. The cashier of a railroad company, generally speaking, corresponds to the receiving-teller of a bank. He is at one end of a long room; and so definite and exacting are his duties, that he knows less about what is going on at the other end than any one else in the office.

Spending Three Millions a Month.

The paymaster's department on a road like the Central has the disbursing of about $3,000,000 a month in cash for wages of employees. There are two men who do nothing else, and they have a corps of assistants. In New York State wages of railroad employees have to be paid in cash every two weeks. The treasurer's office receives from the accounting department every week a list of the payments to be made and the gross amount to be disbursed each day.

The necessary arrangements are made before the pay-cars start out, so that so many hundreds of thousands of dollars may be turned over to each paymaster at certain cities along the line each day. The money is not put in envelopes for the employees, but is counted out to each one of them as he passes through the pay-car.

The average amount that the pay-car starts out with on its daily trip is $200,000, and it is out on the line every day. The railroads whose eastern terminals or docks are along the water-front of New York generally take about two days every fortnight to pay off their marine and dock forces.

The general office force of the treasurer's department has charge of the books of accounts controlling the operations of the departments, the correspondence, and other details that are not taken care of by the other parts of the office.

On a large railroad the treasurer's

office will have perhaps 150 employees. Every one of these is bonded in a greater or less amount, no matter whether or not he handles any cash. The smallest bond is not less than $500. The treasurer himself is bonded from $100,000 to $200,000, and the bonds of the paymasters are about the same.

The other responsible heads of departments, chief clerks, etc., are bonded from $5,000 to $100,000 each. The total amount of the bonds of all employees of the treasurer's office usually runs into the millions on a big line where vast sums are handled daily.

The salaries usually paid employees of the treasurer's department of a great railway are generally higher than those in other departments. They are also in excess of those paid in large banks for the same class of labor.

The heads of departments receive from $200 to $300 a month. An assistant treasurer's salary may be anywhere between $4,000 and $7,500 per annum. Paymasters draw from $150 to $200 a month. There are a number of employees whose salaries range from $75 to $150 a month. Beginners start at about $40 a month.

To the Beginner.

The easiest way to enter the treasurer's department—as well as any other in the railroad service—is by becoming an expert stenographer. In that case the initial wage is at least $60 a month, and frequently $80 a month. A stenographer stands much better chance of quick promotion, if he is apt and shows ability, than any other of the minor class of employees on account of his having unusual opportunities to familiarize himself with the workings, not only of his own department, but with those of all the others.

The voucher department, in the roads using that system, is usually considered the most important of all, and its chief is generally next in line for promotion to the post of assistant treasurer. The cashier in some roads stand next in the order of promotion to the principal place below that of the chief executive.

The treasurer's department is regarded as one of the most desirable by many young men who settle on railroad work for their career. It does not offer so many opportunities for advancement as does the operating department, but there seems to be a certain prestige about the closely guarded, almost mysterious handling of great sums of money that make a place in the treasurer's office much coveted by beginners.

Once firmly settled there, an employee is almost certain to stay indefinitely, so long as he does his work well and honestly. Promotions come slowly. When some one ahead drops out, the line moves up one almost automatically, and the vacancy at the bottom is filled by a new hand. In every long-established treasurer's office it will be found that nine-tenths of the employees started in as boys at the bottom of the ladder.

The callers at the treasurer's department are not the diversified lot with which the traffic and operating departments are familiar. As a result, the routine is rarely touched with sprightly incidents. Almost without exception every visitor has some definite errand that is quickly despatched. The nature of the work performed by this department demands the utmost care and concentration of attention on the matters in hand; therefore the employees are guarded from interruption as much as possible.

TREASURE OF THE WORLD.

BY STEPHEN CHALMERS,
Author of "The Cataclysm," "A Daughter of the Armada," etc.

Showing That Weapons Are Not Always What They Seem, and There Is Danger in the Recoil.

SYNOPSIS OF PREVIOUS CHAPTERS.

PHILIP SAND, being informed that he has a year before tuberculosis will claim him as a victim, prepares to get the best out of the time. Being financially ruined, he raises ten thousand dollars on his life-insurance policy of fifty thousand from a money-lender named Merton Scragg, who opens up on the comfortable promise that Sand will not be living that day a year. He charters a yacht to go treasure-hunting, sends the yacht ahead, and himself goes down on the regular liner for Panama. On board he meets Miss Verina Harding. They are wrecked. Sand finds himself on the only fruitful island of a group. He finds pigs inhabiting a cave containing boxes, which turn out to be the treasure-chests he is in search of. He builds a lean-to with the gold bars. He is startled by the presence of Miss Harding, who has wandered from a camp of the shipwrecked sailors in order to avoid the attentions of an American drummer.

CHAPTER IX.

Captain Howells Takes Charge.

PHILIP could not help feeling pleased with the turn affairs had taken. As he walked along the beach and through the brush toward the eastern end of the island, he thought over the new situation. Before the coming of Miss Harding he had had enough to occupy his time—fishing, cooking, and the difficulties attending both.

Something had to happen to keep the adventure going, and something had happened. Miss Harding had turned up just at the edge of boredom, and with the news she brought of the landing of the sailors there came a dozen lively possibilities.

"A man gets used to anything," Philip said to the sea in his day-dreamy fashion—he was almost forgetting his errand. "Take me, for instance. I used to dabble with Grampa Septimus's books and papers, and I used to fish. Then I was plunged to the other extreme—work. Well, I never did get used to work, but in time, perhaps, I might have. They *do* say a man gets used to it, but it must require a lot of patience and practise.

"Then I was told to get my coffin ready. I've been dying now for over a month. I'm quite used to it now, perhaps because I've practised dying so hard. I've already been nearly dead by tuberculosis, drowning, and starvation, inside of thirty days. I believe I could die to order with hardly an effort—just a little will power; but maybe practise has served only to harden me.

"I wonder if there was ever a man who practised dying so hard that he got hardened and didn't die after all? That's an interesting thing to work out while I'm fishing."

He suddenly woke up and laughed.

"Where was I? Oh, yes, I was thinking about the changing scenes of life. Fate certainly has its compensations. When the victim is just tired of one condition, along comes another, and so the old play rolls on to the last curtain, and even the finish is welcome as a change."

He came back by degrees to the pres-

ent condition. Now Miss Harding was on the stage again, and the villain, Higgs, and the supernumeraries, the sailors—who, for all he knew, might be the principals before matters were brought to a close.

If story-books were so closely related to what usually happens in life, then there was a likelihood that the sailors would try to get possession of that treasure if they knew of its existence. It was, therefore, policy to hide the existence of it as long as possible.

It was not difficult to reach the eastern end of the island and find the camp of the shipwrecked sailors. All Philip had to do was to walk east and keep near the beach or on it. In about half an hour he caught a delicious whiff of cooking food.

"That's pork!" sighed Philip. "There's no safety in numbers—for the pigs. They must have cornered one or two."

He presently came upon the camp. It was in a bit of glade beneath a grove of coconuts. Philip surveyed the scene before he made his entrance. There was a good fire blazing in the middle of the picture, and the air was full of the scent of cooked flesh and cooked something else which Philip could not identify, although he confessed to himself that it had a tempting odor.

Around the fire four or five men sprawled, with their caps under their heads for pillows. One man was dangerously near the blaze. All at once Philip Sand's peculiarly constituted brain flashed back a few hundred years. He smiled. It was just like the pirates' barbecue, and that man so near the fire was Gibby's father. Presently he would be awakened by the smell of his own flesh burning and he would spit in the fire to show his contempt for the entire proceedings.

Down on the beach another man—Philip recognized him as the mate, Howells—was pacing slowly up and down with his arms folded and his head sunk, save when he lifted his eyes to the horizon as he turned on his promenade. Philip felt sorry for the man.

Presently one of the men by the fire got up and carefully placed in the fire one of the large, green, globular fruits which Philip had noticed that first day in the jungle. When he had lodged it to his satisfaction, he poked the embers in another place, and presently speared and brought out a big, black ball.

"Here y'are!" he hailed. "Breadfruit served hot!"

A grunt was all the thanks he got for his labors as cook.

The men who sprawled around the camp-fire were gorged with pork, roasted breadfruit, and coconut milk. It was the hour of siesta.

The cook presently lay down, after thoughtfully spitting in the fire. Philip emerged from the trees and crossed the glade unnoticed, although he all but stepped over one of the men. He made straight for the mate, who was still promenading on the beach.

"Captain Howells?" said he.

The disgraced man stopped short and stared at him. He did not recognize Philip as the man whom he had insulted on the bridge that night. In fact, his memory was quite hazy as to the details of that night's affairs. He presumed, however, that Philip was another survivor of the wreck—*his* wreck, as he mentally termed it.

"Where did you come from?" he inquired gruffly.

"Well," said Philip, smiling, "as I was on the island before you arrived, the question might come from me to you. However, Miss Harding has told me your story, and I have come over here to make a suggestion."

"Well?"

"I presume that you are still in command?"

"Sakes alive!" came from the vicinity of the fire. "Look who's here!"

The men woke up suddenly and surveyed Philip with no little amazement. Not that they recognized him, but the presence of any stranger in their midst partook of *Crusoe's* surprise when he found the footsteps of *Friday*.

In a moment they were standing around him, curious for information. Philip told his story briefly, adding: "And for a week I've been trying to catch a pig. Incidentally, would you mind telling me what there is on this island that I may safely eat?"

The men stared at him, then one of

them burst out in a loud, lazy guffaw and turned to the fire. Presently he returned with a handful of miscellaneous fruits of the earth. He named each of them, and told their merits as edibles. Again Philip cursed himself for a fool, but it was a relief to know that he would not have to fish from dawn to dusk to feed the extra mouth.

The captain, in the meantime, had resumed his uneasy and indifferent promenade. Philip, however, brought him to a standstill with a word.

"As I was saying, I have a suggestion to offer—a proposition to make. You, as captain—"

All at once the mate broke out in a fury. It was like the sudden explosion of a long-smoldering volcano.

"Don't call me captain!" he almost screamed. "Don't call me captain. I'm not captain. I've lost my ticket. You know it. You're making game of me. Stop it, or by—I'll kill you right where you stand."

Then the man stood still in the sudden silence that followed. His face was purple with rage, which, as it cooled down, left him pale and trembling. In a moment he spun around on his heel and walked up and down with the appearance of an ashamed, broken man.

"That might be your misfortune as much as your fault, captain," said Philip quietly.

Howells stopped again and looked at Sand, apparently thunderstruck with surprise. He seemed to be at a loss for words to meet the unexpected remark. Finally he blurted out:

"Thank you!" adding, as an afterthought: "Thank you for nothing."

"Anyway," said Philip pleasantly, "we are all in the same boat—that is, on the same island. There is a lady here, too. If any of you are married, or have—sisters, you will appreciate the delicacy of her position."

"That's right," said the captain gruffly.

"Sye!" exclaimed one of the sailors, a cockney, "I wished I was married or had that for a sister."

"Stow yer gab!" said a second sailor. "Let the gentleman have his say fust."

"I was going to say," said Philip imperturbably, "that as I have employed the week making myself snug, and as the lady has turned up and accepted my hospitality, all of us should agree to make her as comfortable as possible, and I think the best way to effect that is to give her all the privacy that her sex and station would indicate as her due."

"He talks like a schoolmaster," said the cockney sailor.

Philip fixed the man with a stern eye. The others turned upon the Englishman as much as to say:

"Talk up. He's waiting for you."

The cockney, feeling that he was called upon to make a remark, said, with a knowing grin:

"'E wants to put the chalk on us. 'E wants to monopolize the fe-male sex."

"If I hear another word from you," said Philip steadily, "I'll make such a monopoly of you that there won't be room for a chalk mark. If you, or any one here, offends that lady, either by speech or action, I will indicate my position toward the lady more definitely."

"Oh, very well," said the impertinent cockney. "Let's hear wot your position is toward the lydy, and we'll tell ye wot we thinks."

Philip flushed, but steadily answered:

"My position toward the lady is merely that which yours should be—that of a man. I have given up the little house I have made to her use, and I will berth forward, if you can understand that. I will ask for Captain Howells's cooperation in keeping her portion of the island safe from trespass.

"I had not meant to discuss this possible difficulty, and what may seem to reflect upon the other men is apologized for. It is wholly and solely directed at this Englishman with the nasty tongue. Captain Howells," he added, turning to the down-hearted promenader, "you are still in command and responsible for the welfare of your crew and the passengers. I ask that you enforce discipline where and when it is required."

"'E ain't capt'n!" said the cockney scoffingly. "'E was capt'n for a night, and never real capt'n, anyway. Leastways, there ain't no capt'ns ashore."

"Ain't there?" roared Howells, suddenly waking up. "Look here! I've been mooning long enough, and ye know why. You've had something to eat, and

now you're just about ripe for trouble—eh? Well, mark my words, I'm not going to make matters any worse'n I've done. I'm captain, d'ye understand, from this minute until we're taken off. And there's going to be discipline, as this gentleman says."

To prove that he meant what he was saying, Howells walked right up to the cockney and struck him between the eyes. The Englishman went down on the sand, but was up again in a moment. All his national fighting blood was up. He doubled his fists and charged the captain. They would have engaged had not the other sailors come between them.

"Come on!" cried one derisively. "What's the use of fighting? Ain't we got all we want? Come on! Let's cook some more pork!"

"That's an excellent idea," said Philip. "I'll call again and get rations for the passengers. Thank you very much, Captain Howells."

The title was uttered without emphasis, but it conveyed something to Howells, who glanced gratefully at Philip, grunted something, and saluted. Philip returned the courtesy and walked away.

As he returned to the golden hut, Philip felt uneasy. But, so far, he had achieved something. They would respect Miss Harding, but—the treasure?

When they learned of that, as they must, sooner or later, what would be their attitude?

Philip doubted whether the wind-mooded captain would be able to govern their lust for gold. As Howells had said himself, they had plenty to eat and little to do, and they were about ripe for trouble. Undisciplined sailors are the most uncontrollable element in the world.

Also— And then Philip stopped and wondered. Where was Higgs? He had not been among the men in the camp. His name had not been mentioned. Philip hastened on to the hut, his uneasiness growing with every step. When within fifty yards of the little house of gold bricks, he stopped again. He could hear voices.

He advanced slowly, listening intently. At the edge of the brush he paused and peeped through to the beach. Miss Harding was there. So was Higgs.

The agent of the Kurve-Kut Korset and the No-Kut Klip was standing before Miss Harding. His face—his eyes and his mouth particularly—were moving with passion, and he was talking rapidly to Miss Harding.

"You must listen to me, dear," he was saying. "I've been waiting this chance for two weeks. You ran away from me this morning, but that was natural bashfulness. I know you care, so you needn't be bashful any more. I'd make you happy, and, with a figure like yours, I could make a fortune out of the new corset."

He uttered another sentence—only one, and then Philip stepped out from the brush. Miss Harding saw him first. A look of glad relief mingled with the anger of her crimson face.

"Now," she said to Higgs, pointing to Philip Sand, "repeat what you said—what you last said. Repeat it in the presence of a *gentleman.*"

Mr. Theodore Higgs turned around slowly. His face turned pale at sight of the man who had once called him an "unspeakable cad" in no indefinite manner, but he seemed to believe that defiant bluster would save the situation and himself.

"What's *he* got to do with it?" he protested. "This is a matter between us—as it always is between two people."

"I'm afraid I stand *in loco parentis* here," said Philip, still advancing, "or in the light of an elder brother—or to simplify matters, Mr. Higgs, as a man and a gentleman."

With the last word, he brought the flat of his hand against Higgs's left cheek. The corset agent staggered back, then fell down as Philip administered a similar slap on his right cheek. With a gasp of weak fury, Higgs scrambled to his feet and picked up a large stone.

"Look out!" cried Philip to Miss Harding.

The stone whizzed past his own head and struck the wall of the hut. Philip stood on guard, awaiting a possible onslaught; but just as Higgs was about to throw another stone, he seemed to become suddenly petrified.

His eyes were staring past Philip Sand, and were fixed on the wall of the hut. Suddenly he dropped the stone and walked rapidly into the brush.

"What on earth—" exclaimed Philip.

Then he saw the cause of Higgs's astonishment. The stone, in striking the wall, had gored into the soft metal. There was a rift of glittering yellow, flashing purely in the sunlight.

"No wonder he was astonished!" said Philip to Miss Harding. To himself he added: "Now the murder's out. what will they do about it?"

Miss Harding, with her face averted, held out her hand to him. Without a word, and hardly knowing what he was doing, he bent and kissed the delicate fingers.

"I am glad I was of service, Miss Harding. Let us forget about it, please."

CHAPTER X.

The Girl or the Gold.

MISS HARDING had more curiosity about the treasure than Philip had. It was she who insisted that, for the fun of the thing, if for no other reason, they open all the boxes and ascertain their contents.

In the twilight of that day he led her to the cave where he had slept the first nights of his stay on the island. In the box which he had previously opened, they presently discovered a curious dagger with a jeweled hilt. Its blade was long and keen.

"As I am a lone woman," said Miss Harding laughingly, "I will possess myself of this—with your permission, of course."

"Mine?" said Philip stupidly. "Oh, yes." He suddenly remembered with a curious mixture of feeling that he was the sole possessor of this great wealth.

Miss Harding stuck the blade into her belt, and posed for a moment in an adventuress manner which emphasized her sweetness.

"Watch you don't stick yourself," said Philip anxiously.

He pried open the second box, and found its contents similar to those of the first—images, plate, silks, strings of precious stones, bracelets, brooches, and all sorts of apparent loot. Miss Harding passed an hour trying them on in her woman's way, while Philip dug into the other boxes in search of some weapon of defense.

His search was vain until he came to the last box—there were about six in all. In this he found a pair of very ancient pistols, also a curious old sword.

The pistols were utterly useless; but they were in fair condition, and had a particularly venomous look. He stowed them away in his coat pockets. The sword was a handy weapon, despite its age. It had apparently seen active service.

"I hope it won't see any more," said Philip; "but I think I'll take it for ornament. A man on a desert island should have a belt full of weapons; don't you think so, Miss Harding?"

She, with the jeweled dagger stuck in her waist-belt, could not but agree that it was picturesque, if nothing else.

When it was dark he took her back to the hut and left her there, saying he would go to the camp for rations.

"We paid our passage-money, you know, and we are entitled to pork at least." said he.

"Come back quick," she said in a low voice.

Philip wondered, as he walked to the camp, just what her tone was. He could understand that she was afraid to be alone in the night; yet, if he was to sleep under cover at all, he must go to the cave, and the cave was some distance from the hut.

At the sailors' camp he was received with a silence which was significant. Higgs was there. The men had been talking volubly as Philip came up, but the moment he entered the circle of light, a hush fell, and it seemed to Philip that they regarded him with looks in which curiosity, slyness, and awe were mingled. Higgs muttered something, but it escaped Philip.

"Is that pork ready?" he asked pleasantly.

One of the men handed Philip a side of cooked pig wrapped in wild banana leaves. Philip took it and turned to go, when the cockney spoke up.

"Ain't you goin' to pye for that?"

"Pay?" said Philip. "Why, certainly. Send in your bill."

As he walked away, Philip heard the Englishman say to his companions:

"Them as 'as it ought to pye, is wot I ses. 'E's got a monop'ly in tin, but we've got a monopoly in pork. Fair is as fair does, is wot—"

Philip passed out of hearing. He came upon the captain on the beach. Howells was walking up and down like a madman, which Philip began to suspect he was. At sight of the other, Howells gave a great start. Then he gave a grunt and walked away. But Philip had seen a peculiar light in the man's eyes—the light that comes when a desperate man is seized with an idea that may work out his salvation.

Philip returned to the hut. Miss Harding was standing at the door, waiting for him. In the clear, white moonlight, she was startlingly beautiful. Philip felt something thicken in his throat. He knew what it was, but sternly remembered a resolve which he had made on the Revuelan the night before the wreck. Love was not for him, or he for love.

"Pork chops," said he prosaically.

She turned her back on him. Philip knelt down and began to hew the chops apart with the old sword.

"Do you know, Miss Harding," said he, determined to down his heart—"do you know that I have no longer the same overpowering ambition to slay a pig?"

She did not answer. Her back was to him, and she was looking at the moon. Perhaps she was thinking of the fate of poor Miss Sharpe.

"Supper's ready," said Philip.

After they had eaten, Philip got up and held out his hand. She had not spoken a word during the meal.

"Now I must bid you good night," he said.

She took the hand that was offered her.

"Where are you going?" she asked quickly.

"To the cave," he said. "You know where it is, if anything should go wrong."

Their hands lingered in the light clasp. All at once a truth—an intuitive truth—flashed through Philip's consciousness.

She was his! She loved him as he loved her! He had only to reach out his arms and take her. He need only let that little hand linger a moment more, and the truth must be confessed between them.

For a moment the air seemed to vibrate with the intensity of his soul's struggle. Love was his if he cared to take it. But his love was the right love, and no man possesses love alone. It is not love unless it is shared by one other.

In this case, Miss Harding was the one other. They might accept what the gods had given them, and be happy in the circumstances into which the gods had thrown them; yet there were other circumstances of which Miss Harding was unaware. His would be the brief joy, hers the long sorrow. He was a doomed man.

It all passed in a moment. He drew his hand from hers and walked away. She may have understood something of what was passing in his mind; she may have intuitively realized that he loved her, but that there was some obstacle in the way of happiness; for, as he went away, she did not say "Good night" even, but turned her back and looked at the moonlit sea. Presently she entered the hut and laid her head against the cool gold of the wall.

Sand walked to the cave with his heart and mind in a struggle for the mastery. His mind was made up, but his heart refused to be in accord with his reasoning.

He lay down in the shelter of the cave and tried to sleep. But sleep was impossible. He knew now that he had loved Miss Harding—Verina Harding—since the day he had taken her away from Higgs, aboard the Revuelan. Never having admitted his love to himself, Miss Harding's supposed death left love in abeyance. He had thought of her many times in a troubled way—as if her loss was a personal sorrow to him—but that was all.

Now, her coming had touched the spring of his heart. She had come in the forenoon, and before the sun was quite out of the west the stemmed emotions of two weeks were clamoring for expression. He loved her. He wanted to tell her so. He dared not, could not, would not; and because confession was impossible, love was greater.

Their love was now a matter of mutual knowledge. *He* dared not speak it; *she* could not utter the initiative word. How hard it would be for them to hold intercourse—especially under the peculiar circumstances in which they were thrown together—without crossing the line!

Philip resolutely turned his thoughts to the more practical questions of the situation. Now that the men knew of the treasure, what would they do? What was in the captain's mind? What meant the attitude of the sailors, silent save for the significant remark of the English cockney?

"I'll hear from them to-morrow," Philip concluded.

Why not to-night? Might they not take advantage of the night to visit the hut and verify Higgs's story, which must have seemed a wild tale when told by him.

Yes, they might come to-night! In another minute Philip was going back along the beach toward the hut. He would stand guard, not over the gold, but the dearer treasure within.

He slowed up as he neared the hut. He did not wish to awaken Miss Harding—Verina—no, Miss Harding. He did not wish her to think that he was stealing around the hut, either. When he came to the edge of the coconut grove, to the west of the bluff against which the hut was built, he stopped and surveyed the surroundings.

The moon was clear. The sea was lapping musically along the belt of white, coral-powder sand. A light breeze was whispering at intervals among the coco fronds. Otherwise, the scene was perfectly still.

So far, all was well. Philip sat down under a coconut-palm and decided to sleep with one eye open. He merely wished to make sure that no one disturbed Miss Harding.

He slept. He was awakened some time later by a sound. The moon was still shining. Conditions were exactly the same. He could see no sign of a human being. Nevertheless, he had heard an unmistakable sound, as of a branch being thrust aside and snapping as it bent.

He tiptoed forward to the side of the hut and passed softly into the shadowy side of it. Presently he saw the figure of a man standing under a coconut-palm with his face turned toward the hut. Philip drew the ancient pistol from his pocket, held it up before him, and stepped into the moonlight and toward the figure.

"Stand still," he said quietly.

The figure did not move. The man must have noticed the weapon in the other's hand, without being able to recognize its useless character. When Philip was within a few paces of the figure, he stopped.

"Stand out and let me see you," he said.

The man stepped defiantly into the moonlight. It was Howells.

"I expected better of you," said Philip Sand. "What did you want at this time of the night?"

"I wanted to see whether that Higgs fellow was talking straight or not," said Howells sullenly. "I see it's metal, all right."

Out of the corner of his eye, Philip caught a glint of metal shimmering in the moonlight.

"Yes, it's metal. It's gold, if that is what you want to know," said Philip. "What of it?"

"What of it? What of it?" repeated Howells quickly. "Good Heavens! man—can't you understand? That's a fortune. It's big enough to share. Can't you see that if I have money I can snap my fingers at 'em? They'll put me on trial, and I'll lose my ticket. It's lost already. I'm a ruined man unless I have money and can snap my fingers at 'em—snap my fingers at 'em!"

He repeated the phrase as if his mind had become obsessed with the idea of snapping his fingers at 'em.

"Well?" said Philip.

"Look here," said Howells, moving forward confidentially. "It's a fortune for two of us—say three, for you'll want the lady to be in on it. It won't mean much if it is divided between the five others and Higgs. I'll come over to your side if you'll divide with me. I'll protect you and the lady."

"And stir sides at the outset," said Philip coolly. "No, you won't. The treasure is nothing to me compared with

the safety of the lady. It is your duty as captain to work to the same end. As for the treasure, it can be divided into nine lots, as far as I am concerned; but for the present, it is better left alone. I would suggest, captain, that you go back where you came from and do your duty, which is to preserve discipline until we can get this lady out of her present dilemma. Will you go?"

"Look here," said the captain, after a pause. "I'll be frank with you. I need the money, and I'm going to get it. I'm going to get as much of it as I can lay hands on.

"It's my only chance to snap my fingers at 'em. I can't afford to divide it among nine. If you won't take me in—I'll—I'll have to lay some other plan."

"Meaning," said Philip, "that you will turn four fairly decent men into criminals and lead them against me?"

"I didn't go as far as that," said the captain.

"But you will go as far as that if I don't conspire with you to cheat your men out of what is likely to be a fair share and share alike."

There was silence. A breeze rustled overhead in the fronds with a sound like running water. The air became perceptibly cooler. The dawn was coming.

"Better go back where you came from and think it over," said Philip, with a little wave of the old pistol. "I expect you will call to-morrow, anyway."

Howells faced him for a moment. "Is that your last word?" he asked.

"Not necessarily. I suppose you will talk to-morrow."

"Yes," said the captain, turning to go. "I'll *talk* to-morrow."

When he had gone, Philip turned to the east. The dawn was brightening rapidly, and the moonlight was becoming pale.

"I think I'll fish until—until she gets up—and think this over."

He procured his jeweled fishing-line without disturbing her, and went to the barren rocks. He caught no fish, for he was paying no attention to his line. He was hammering out the problem of the girl or the gold.

The gold meant nothing to him, yet the commercial instinct of Philander was anxious to fight for it. Verina's safety meant everything to him. Truth to tell, his unwillingness to give up the treasure was due to the fact that it meant giving up Verina's bedroom to the hands of vandals.

He knew nothing about her save that he loved her, that her name was Verina Harding, that she was beautiful, and that she had once been the guest of a person called Merton Scragg, on a steam-yacht called the Chameleon.

And she knew nothing of him—absolutely nothing; and, particularly, she did not know that he was a man who had less than eleven months to live, and that his life was mortgaged, anyway, to one Merton Scragg.

But the present problem was whether he should turn over the treasure to Howells and his gang, for the sake of peace, or whether he should take Howells on his side and fight for the gold. He might have chosen the latter course but he did not trust Howells.

The disgraced man was adrift on a straw. He would clutch at anything else that seemed to offer more stable assurance of his future welfare. He would trick Philip and Verina as readily as he had proposed to trick his men. He was fighting for self; Philip was fighting for another.

"So far as I am concerned, they can have the treasure, and welcome," Philip told himself. "I've had the fun of finding it, and building a house with it. The only thing is, I hate to have them tear down that house, especially now that a lady owns it. I'll ask Verina."

"Mis-ter Sand!" cried a clear voice down the beach.

He turned. There she was standing in the doorway in the early sunlight. His heart leaped, as it will do in a lover when he sees his love of a morning. But instantly the shadow came back, and he said to himself:

"No!"

"My name," he remarked lightly, as he came trudging through the sand toward her, "is eminently apt. Coupled with my commendable ambition to kill a pig, you might call me Sand-Hog."

"Your other name is Philip, is it not?" she inquired evenly.

"Yes — it's Philip," he said a little unsteadily. "And your other name is Verina, isn't it?"

"Yes—Verina."

"Well, I have decided to call you Philip," she said quite steadily.

"I hope the decision was not arrived at by any loss of sleep?" he said, laughing.

Then he was sorry he had said it. She colored, and turned her eyes to the sea.

"You have been very good to me," she said. "I will be frank. I didn't sleep. I heard every sound — everything."

"Oh—did you?" he inquired stupidly. "Then perhaps I need not say any more. I thought somebody might come, and somebody did."

"I know. I saw you under the tree—and I was glad."

"Perhaps, Verina, you can tell me what I should do. Should I let them have the treasure or—" He stopped. There was an amazed light in her eyes.

"No!" she said abruptly. "That is the one thing I did not understand. Even if you were very rich, you would be foolish to yield what is yours. Keep it, Philip. Fight for it, if necessary."

He stood before her, confused.

"I am afraid you do not understand my position," he began, but he was interrupted by a crackling in the brush. "Here they come—already," he said. "All right, Miss Harding, I won't give up—until I have explained. Now for trouble!"

The five sailors came along the beach at a half-run, headed by Mr. Higgs and Captain Howells. Philip shoved a hand into his right pocket, and let it remain there suggestively while he awaited the enemy.

CHAPTER XI.

The Treasure of the World.

MISS HARDING stood in the doorway of the golden hut. Philip stood out on the sand with his face toward the oncoming party, and his hand ostentatiously clutching something in the right pocket of his coat.

"Well," said he to Captain Howells, as the leader halted his men about twenty paces from the defender, "I suppose you've come to talk."

"That's about the size of it," said Howells doggedly. "I'm a man that likes to see things negotiated peaceably. That was why I came to confer with you this morning."

Philip smiled. The explanation was obviously meant for the men.

"And what conclusion have you come to, granting that I refuse to cheat—"

"Now, don't let's have any ill-feeling, Mr. Sand," interrupted Howells loudly and hastily. "We want to see fair do and share and share alike of that treasure. Ain't that so, boys?" he inquired, turning to the men.

"That's what we want!" came the chorus, but Philip was observing closely and a sly wink between Higgs and the cockney sailor did not escape him.

"That's so—with a wink," said Philip coolly. "Well, I agree, so the wink was unnecessary, Mr. Higgs."

Higgs said nothing, but scowled at Philip Sand from his stronghold of numbers.

"You agreeing, then," said Howells, "there is nothing more to be said, except this: We—and we're the majority, Mr. Sand—held council this morning, and knowing the ways of sailors and trading skippers, we came to the conclusion that that treasure ain't safe standing up there in full view of any ship that comes along—and we certainly hope that a ship will come along to pick us up."

"Well?" said Philip non-committally.

"What we propose is this, that we remove the treasure to a safer place and hide it, and there leave it, saying nothing about it to the skipper that picks us up, and coming back for it in a chartered steamer."

"That sounds very practical," said Philip. "Only the treasure cannot be moved at present."

"And why not?" demanded Howells aggressively.

"You will perhaps admit that I have a prior right over this treasure. You will perhaps *not* admit that any share which may come to you is purely in the nature of a gratuity from me. However, I have already stated my willingness to divide the stuff into nine lots, but I have no intention of doing this

until it suits my convenience, or, rather, the convenience of the lady to whom I have temporarily loaned the use of the treasure as a house to live in."

"We can build another house," put in Higgs promptly.

"I wish to hear nothing from you, Mr. Higgs," said Philip. "In fact, when it comes to the division of the treasure I think I will divide your share among decent men. What have you to say, Captain Howells?"

"I take it upon me to repeat Mr. Higgs's suggestion," said the captain. "We will build another house for the lady."

"No, thank you," said Philip. "The lady is very comfortable where she is, and has been tossed about enough through you. She will stay where she is."

The reference to the captain's failings was unfortunate, but Philip was angling for the captain's trump card, which was bound to come out sooner or later. It came out with a burst of temper.

"All right, Mr. Sand. That settles your hash," said Howells coarsely. "There's seven of us and only one and a half of you. If you don't come to our way of thinking, smart, and give up that treasure to them as has the right of majority, then we'll take steps to take it from you, and maybe then we won't count you and your lady friend in on the division, keeping it for expenses and trouble incurred in litigation, as you might say."

"That, of course, was what you had your mind made up to," said Philip.

"Well," he added, twisting his hand around in his right coat-pocket, "my mind is made up, too. This treasure is mine—do you understand?—*mine!*—and you will have a share of it only if you behave yourselves.

"In the meantime, you are on probation, and my orders are that you get back where you came from and spend your days in hunting pigs and cooking them. Also, I would suggest that you try for fish. There are some fine ones off that pile of rocks. Now, go!"

He accompanied the last peremptory order with another suggestive movement of his concealed right hand. The captain understood, and it was clear to Philip that he had informed the others of the existence of a pistol. Philip blessed the light that had been too dim for the captain to have seen the nature of the old weapon.

"Very well," said Howells after a pause. "We will give you from now until to-morrow morning to decide what it is going to be. If you are not out of that hut by then, we will take it that you mean fight, and you can abide by the consequences."

"I agree to that," said Philip. "Until to-morrow morning at this time, Captain Howells. Good morning!"

The men turned to go at a signal from Howells. Philip called after them:

"And, by the way, until to-morrow morning, any man who comes within two hundred yards of this spot, will be *shot!*"

Howells half turned. He heard, but made no reply. Philip watched the man and his little band of underlings out of sight, then turned to Miss Harding.

"I managed that scene very well, don't you think?" he said with mock modesty.

"Yes," she said, absently. "Oh, what are we to do?"

"I don't know," said Philip candidly. "We are in a tight place, Verina."

"What would you do, Philip, if I were not here, for I know—"

"Now I will explain," he said. "If you were not here, I would let them have the treasure and give them a blessing with it."

Again she looked at him in a non-comprehending manner.

"Then give it to them," she said in a disappointed way, "only— You see, I— My father is very rich, Mr. Sand, and my safety means more to him than a ninth share of a treasure, which might otherwise cost my life. But with you it is—it may be different—"

"Yes," said Philip, "it is very different. I am very poor—poor in ways that you do not know. I have no money and—"

"What is it, Mr. Sand—Philip? Don't you think it would be better if you told me. I know there is something."

"I think it would be better," he said slowly. "If I were a strong man and had all life before me, this treasure would

mean everything to me—at least, it would mean much and the rest would be easy. I don't mean that being rich would give me everything my heart desired, but if the treasure were worth anything to me, then nothing else would be in vain."

"I'm afraid this is a riddle," she said.

"I am afraid it is—to you," said Philip, "but I somehow dislike telling you the truth. . . . But I will. . . . You see, Miss Harding—I am not in very good health. In fact—"

He was looking straight at her. He saw her start and become very agitated. Her eyes sought his, then roamed over his sun-tanned face and square shoulders.

"You?" she almost whispered. "Why, it is—absurd!"

"There is an absurd side to it, even to me," he said. "But if an expert in diagnosis knows his business, my life—"

"Don't!" she cried. "Don't say it. It is a lie—it isn't true!"

"I am afraid it is true," said Philip. "And even if it isn't, I—I have so ordered my life that—I have ordered it to fit the seeming fact."

He stopped. He could see that she was laboring under a grievous hurt. He feared to be a witness of her agitation. It meant so much. He could not fail to recognize openly what it meant, if he continued to witness it. He turned away for a little while. By and by he heard her say:

"What is it—Philip?"

He told her in one word.

"Oh!" she said, in a dreary kind of way.

His back was still toward her. There was silence. Finally she said:

"Mr. Sand, you need not turn your back on me like that. Look at me."

He slowly turned around and looked. She was standing erect with her hands clasped before her and her eyes were brimming with unsuppressed tears. Philip was shaken from head to foot. He came forward and held out his hand. She took it, holding it far out from her.

"I just want to say something," she said, smiling through her tears. "You are the bravest man I have ever met—morally and—and physically, too, because you are not strong. I just wanted you to know that—what I think of you, and—and this. We understand one another, I think—don't we, Philip?"

"Yes, Verina, I think we do, but don't let us speak about it. I am afraid—" He stopped a moment—"I am afraid I am not as strong or as brave as you think."

He held her hand firmly for a moment, then resolutely dropped it. Presently he got his string of pearls with the hook on it and said:

"Come and see me catch fish. We have all day to think and talk about what it is best to do."

She went with him. For hours they sat in silence, more or less. She was puzzling over something which he had said. If he had no money, then how was it that he was able to charter such a yacht as she knew the Chameleon to be.

As if in answer to her thought, he said:

"How strange a thing Fate is. I chartered the yacht Chameleon with the idea of hunting for this very treasure upon which I stumbled.

"If the treasure was of no use to you, why did you propose to hunt for it?" she asked.

"I wanted to enjoy life," said he simply, "and if there is anything of the boy in you—and I think the boy spirit is in every living thing, more or less—you will understand why treasure-hunting appealed to a man who—"

"Yes, I see," she said quickly. "But the treasure would enable you to do so much more in the way of traveling and enjoying life—that is, taking it for granted that is what you want and that you are—not rich."

"I have about five thousand dollars," said he frankly, "and then the yacht is mine for a year. If the treasure had failed, I should have turned the Chameleon into a filibuster, or a coconut-trader, or something."

She was silent. She understood now. Toward dusk they returned from the fishing. While he built the fire she prepared the catch for a meal. He had decided not to risk his life in the camp of the enemy, and until matters were settled they could forego pork.

"That, by the way, is a consideration in favor of yielding to them," he said. "We may have to return to a fish diet if

we don't, unless I should achieve my ambition."

Just as they were eating supper, a whistle came from the beach to the eastward. Philip jumped to his feet. A man stood near the pile of rocks. In his right hand he carried and waved a stick with a white rag tied to it.

"A flag of truce!" Philip chuckled, thinking of the harmless bit of old iron which necessitated this precaution in advance.

He himself went out to meet the man, one of the sailors. The fellow handed him a folded paper, which bore on the outside the imprint of the "Kurve-Kut Korset" and the name and address of Mr. Theodore Higgs.

The message was written on the inside of the paper, which was a flattened-out envelope. Philip read it aloud in a jocular tone, so that Verina could hear:

"CAICOS ISLAND,
"August 14th, 19—.

"MR. SAND, CAICOS ISLAND.

"DEAR SIR:—This letter is delivered by our Mr. Svenson.

"You are our Mr. Svenson," said Philip to the sailor.

"Ay tank so. I ban call Axel Svenson, sir."

Philip proceeded with the letter; which was obviously the work of the accomplished agent of the Kurve-Kut Korset and the No-Kut Klip.

"Without any desire to appear discourteous, our Mr. Svenson is authorized to confirm the following:

"(1) That if you will agree to give up the treasure peaceably and without resort to firearms, we will agree to share and share alike, you and the lady being entitled to a ninth part of the treasure each, when the said treasure is valued and converted into money.

"(2) That if you do not agree to this, to-morrow morning we will take possession of the treasure and eject the present occupants of the house of which the treasure is built.

"He got mixed that time," laughed Philip, turning to Verina. He continued from the note:

"Furthermore, we know that you have no ammunition for the revolver which you carry, and the cartridges in it won't go off, because they got wet coming ashore."

"Very well, Mr. Svenson, tell Mr. Higgs that his letter is so succinct and comprehensive and his thoughts so delicately expressed, that I found it unnecessary to subject you to any cross-examination."

Axel Svenson scratched his head and was still scratching it as he disappeared into the brush.

"Well," said Philip, "it *is* quite funny, but now I think it is time we came to a serious consideration of this—ultimatum. What are we going to do?"

"Philip," said Verina, suddenly grave, "I have been thinking. I don't want any of the horrid stuff for myself. So it is just you. If you don't need it—I mean, want it, then let the old thing go."

"Verina," said he, "I don't want it. Your safety concerns me more than all the treasure of the world. You know that. Before you came, the pigs were kicking these ingots and jewels with their hoofs. Before you came I was fishing for something to eat with a pearl-necklace and a ruby pin. Now that you are here, I am not going to place any fictitious value upon the husks that the swine did kick and the fish did eat, as against your life."

"And your own?"

"Mine?"

"I'm sorry," she said quickly.

He laughed. "Don't mention it. It isn't worth mentioning. Let's give 'em the treasure, Verina, and—let me remind you of something."

He came up to her and put his mouth close to her ear. Her hair brushed his lips, and all at once the playful spirit had borne him into the depths of sweet pain.

"There's more treasure—"

He meant to say that there was more treasure in the cave to which they would retreat, but his tongue stuck. All at once he was only conscious of the nearness of her face. And to make matters worse, she divined the cause of his stopped utterance. She suddenly turned and slipped her arms around his neck.

(To be continued.)

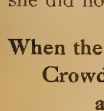
Christmas On a Flooded Track.

BY CLARA MORRIS.

THE TRUE STORY SERIES. There are few situations in life from which some comfort cannot be derived. Two full houses and many things of Christmas cheer were waiting for Miss Morris, but the flood was unrelenting. Only one consolation remained, but the actress made the best of it. She gathered what comforts she could about her, and—she did not act.

When the Distinguished Actress Found Herself Far from the Applauding Crowds That Paid to See Her, She Clothed Herself in Philosophy and a Pink Wrapper and Had a Merry Christmas.

TRUE STORY, NUMBER THIRTY-NINE.



CHRISTMAS Eve, and the rain was falling. The performance was over, and, as we were to travel the rest of the night, I hurried back to my private car. Two telegrams awaited me. One said:

> A box and several parcels from the East are awaiting you at Fresno.

Presents and letters from home, I thought, and all the woman in me rejoiced. The other telegram said:

> Your houses are sold out for both performances to-morrow.

All the actress in me was glad.

I awakened twice during the night. Both times we were standing still, and both times I remarked how very quiet the station was, and that the rain was falling. When, after a Greco-Roman struggle with darkness, day dawned, the rain was still falling, and the train was just moving; and, to my surprise, it was going backward.

Even as I rang for my first coffee, we came to a standstill. My waiter told me that a bridge had been washed away, and they were backing to strike another branch road, and that we were exactly on the same spur where our car had been standing for two days past.

"Oh, no! That can't be, Andrew, for there was a good-sized tree in front of my window, and there was a fence."

"Well, lady, the flood has carried away the tree and the fences are all un-

EDITOR'S NOTE: All the stories published in this True Story Series have been carefully verified by application to officers or employees of the roads or companies concerned who are in a position to be acquainted with the facts. Contributors should give us the names of responsible persons to whom we may apply for such verification, in order that fruitless inquiries may be avoided. This condition does not imply any lack of confidence in the veracity of our contributors, but is imposed merely to give greater weight and authenticity to the stories.

Series began in the October, 1906, Railroad Man's Magazine. Single Copies, 10 cents

der water and the river has overflowed everywhere."

I started for the platform, and as I went I muttered, "The wind blew and the rain fell," but my black cook eagerly interrupted me with: "No, Miss Clah, de wind didn't blow. De water carried away de tree and de bridge, too."

I stood and looked with amazement. Nothing but water. The rain did not fall in lines either straight or slanting. Literally, it came down in sheets. No earth—no sky—just water, water, and an ark—I mean a car.

The engineer came splashing to us. In answer to my question as to the cause of our halt, I learned that the water had drowned the engine, and that we were helpless. The man was not at the foot of his class in profanity, for in telling this he "cussed," with perfect impartiality, the engine, the road, the president, the flood, various parts of his own body, introducing little blasphemous trills of great originality.

Finally he growled in a lower tone: "I wouldn't care so much, if it wasn't for Mamie and the kid. They've been countin' for more than a month on my eatin' Christmas dinner with 'em; and now they'll have to sit down at table alone, with a blankety-blank big turkey, and do nothin' but sniffle and worry, instead of havin' fun."

My shock merged into pity for Mamie and the kid.

Then I had a short, damp interview with my manager, in which I learned something of the wonderful elasticity of the human countenance—when it is drawn downward. Poor man! How I sympathized with him, for did we not both long for the receipts of the "two houses that were sold out"?

And still the rain fell and the flood rose and the train moved not — hence more long faces.

I began to understand that my Christmas was to be passed here in this awful loneliness of water. Well — all right! I would make the best of it—which I proceeded to do.

I had the two big lamps lit in my stateroom. I read the lesson and the prayers for the day. I pinned on my pink flannel wrapper the jewel my husband had presented me.

"JOY ENOUGH FOR ME!"

What, a jewel on a flannel wrapper? *Mais, que voulez-vous?* It was Christmas, in a car, and the car in a flood. I tied about my little dog's neck her new ribbon and bell. I had a hot-water bag at my slippered feet, and a pile of pillows placed at my head. Then I cuddled my morsel of a dog close to my side, and opened Balzac's "Cousine Bette." And, the dog eating bonbons and I drinking coffee, I passed Christmas Day without the sight of a wreath or a tree, the scent of roast turkey, or taste of plum pudding. But —Allah is great, and Mohammed is his prophet! I had not acted, and that was joy enough for me!

STRAINING OLD EAGLE-EYE'S NERVES.

Strong Men Get Pretty Badly Shaken Up by Accidents and the Antics of Irresponsible Fools.

"IT gives a fellow a queer feeling to run into a man," said a locomotive fireman. "Last summer we were coming down past Barneveld, on the Rome, Watertown and Ogdensburg line of the New York Central, with a clear block before us.

"We were going at about forty miles an hour, I should say, when all at once I saw one of the milk-station men on a bicycle shoot out in front of the engine. I ducked, for I felt sure we were going to strike him, and when an engine hits anything it's just as well to get down out of the way of flying splinters, glass, and whatever you hit. But nothing happened. I bet the pilot didn't miss him by two feet.

"It is curious how people will get right in front of a train when it is coming down upon them lickety-bang. We were ringing our bell and had blown our whistle, but this fellow thought he could get across all right, and, as it happened, he did. You may be sure, though, that he was limp and shaky when he realized what a close call he had.

"As I say, it makes a fellow feel queer to kill a man. Some years ago we killed one at Richfield Junction. I don't want to remember the details. We killed another near Sherburne. I was on the Delaware, Lackawanna and Western then, and every railroad man on that division knew that this particular fellow was going to get killed some day. He was a habitual drunkard, and every day that we came along he would be driving home and cross the track in front of us.

"When he had crossed just in front of the engine he would turn around and laugh at us. It was hard on our nerves, you may be sure, for we knew that some day he would surely get it.

"Well, one day he did get it. He miscalculated the distance and speed and our engine flung him a hundred feet. The company didn't have to settle, for every man on the line knew of his idiotic actions.

"But it is awful to kill a man. Engineers lay off for months to recover their lost nerve after they have run over some one. Sometimes they never fully recover, and might just as well give up their jobs, for they will do more damage to the company in the way of putting brakes out of business and smashing cars than they can earn.

"When an engineer has once lost his nerve every little thing scares him, and he slams on the emergency brakes at every shadow. They shake up passengers awfully and are likely to injure them.

"The engineer with shattered nerves is usually put on a slow freight, or on a switching-engine. Sometimes in this way they gradually get back to their normal condition and are put on to passenger-trains again."

RAILROAD OPERATED BY HORSES.

ONE of the smallest railroads in operation is the Fulton and Oswego Falls, in New York. It is operated by horses. Its length is one mile.

Its stock is valued at $15,000; it is mortgaged for $15,000.

Last year its gross earnings were $2,602; operating expenses, $2,689; deficit, exclusive of taxes and fixed charges, $87; number of employees, including officials, 3; aggregate salaries and wages, $1,305.

The line extends from Fulton to Oswego Falls, and its only new feature in years is a new whisk-broom hanging in the single car that is operated, presumably for the convenience of passengers.

HE LOWERED HIS TAIL AND SPURNED THE CINDERS WITH PRODIGIOUS LEAPS.

NOT ALWAYS TO THE SWIFT.

BY M. J. PHILLIPS.

Telling of a Race That Was Run Without Cause and Won Without Glory.

"RACING again, aren't they, Timmie?"

"Yes; and Jim's ahead, I'll bet!"

Kathleen Donovan, daughter of Widow Donovan, who runs the railroad-men's boarding-house at Antioch, and lame Timmie Cassidy stood together on Washington Street. Near by, separated by a scant sixty feet, run the Chicago and Antioch —better known as "Aunty"—and the Chicago Great Divide.

Far down the tracks, from each swiftly rushing train, came the long, single blast of the station whistle. On its heels echoed the crossing-signal of Barry Fox, of the Aunty: *Too-oo-oot, too-oo-oot, toot-toot!* Two long and two short, and then, after an appreciable pause, a single sharp *Toot!* That one was for Kathleen Donovan's ears alone, and meant—she knew what.

Jim McGuire, engineer on the Great Divide train, blew for the crossing also. He gave the signal, the prescribed four blasts. But before completing the final shrill note he eased up on the cord a bit, and the screech became a tone lower. The result was comically like a signal-whistle of the village lad to his sweetheart. That was Jim's way of saying—the same thing that Barry has said.

Grr-rr-rrummmm—swirr-rrr-rr! They had dashed over Washington Street neck and neck in a cloud of dust. Only experts like Kathleen and Timmie would have noted that Jim had won the twenty-mile brush by the length of his pilot.

The Great Divide line was on the north, so Jim whizzed by within a few feet of them, his left hand on the "air," his right forearm resting on the sill of the window-cab. He swayed easily in his seat as the big engine and its attendant coaches rocked past amid swirl and clatter.

Jim's blond head never turned, nor did his glance waver from the shining ribbons of steel. But he saw them. His

right hand came up in the semimilitary salute of the railroad man. Timmie responded by yelling at the top of his voice and waving his crutch. Timmie's dog Spot—a big, curly, black fellow, with an irregular white patch on his side—gamboled and barked.

As for Kathleen, she smiled non-committally. Before Jim's engine had shut off the view, she had seen Barry Fox raise his hand in salute, too. Still smiling, she turned and went into the house.

"Aunty" and the Great Divide have the same terminal in Chicago, their trains coming and going on neighboring tracks. Outside the city they diverge, "Aunty" swinging to the south, and the Divide to the north.

At the widest point to this divergence it is thirty miles from rail to rail, as the crow flies. From there, however, they gradually edge back, and at Tiverton they come together again. Tiverton, Owendale, Buckley, Antioch—the stations are scarcely a block apart in all of those places, and the tracks lie side by side for the whole twenty miles.

The passenger-trains which leave Chicago at twelve o'clock, noon, on the rival roads are due at Antioch at five o'clock that same afternoon. Antioch is the first division-point, one hundred and thirty miles from the city. The running-time between Tiverton and Antioch is identical. So, of course, they race.

Racing is strictly against the rules of both roads. Orders condemning it are issued at least one each year from headquarters. In theory everybody frowns upon it; in practise everybody secretly approves of it. The train-crews, as they take the curves on the inside wheels in a mad endeavor to beat that thunderbolt on the other track, will explain sturdily:

"We ain't racin'. We don't care anything about *them*. But we got our *own* time to make, ain't we?" And, of course, that is unanswerable.

But conductor and brakemen hustle off passengers, and the baggageman tosses out baggage as though it burns his fingers. The fireman hangs half-way out the cab-window to catch the "Go-ahead" signal the instant it's made. That is the way they act between Tiverton and Antioch.

Even a division superintendent has been known to look at his watch twelve times in the twenty miles, even though he studiously avoided looking at the train at his elbow. His handing the engineer a cigar at Antioch had nothing to do, of course, with their beating the other fellow two train-lengths to Washington Street.

II.

Widow Donovan's boarding-house is so close to the tracks that it shakes and rattles to the hourly thunder of passing trains. With ambitious firemen and grizzled engineers talking shop about her table day after day, she knows more railroading than a roadmaster. She was peeling potatoes for supper when her daughter entered.

"Racin' again, were they?" she queried, as Kathleen laid down the brown-paper parcel of beefsteak and began preparing a "batch o' biscuits" for the oven.

"Yes, and Jim McGuire won."

"They'll race themselves out of a job, that pair," frowned the widow. "Dan McGann says 'tis a touch of high-life to ride after thim. He says the coaches do be rockin' like a sea-goin' tug. If they ever do pile up he says the whole thing c'n be sold for toothpicks and horseshoe nails."

"My, my, and Dan McGann himself such a slowpoke! Didn't he get thirty days for scaring the new general manager half to death with Nine-ninety-four? Dan McGann, indeed!"

Mrs. Donovan made no reply to the indignant query. Instead, she shoved her steel-rimmed glasses high on her forehead with the knuckle of her forefinger, and regarded her daughter fixedly.

"Kathleen," she said at last, "all this racin' and whistlin' is on your account. Why don't you marry either Jim McGuire or Barry Fox, and have done wid it? Sure, they're both dead in earnest, and dyin' for a chance to talk serious to you."

Any normal-minded man would agree that marriage would be a fascinating question to discuss with Miss Kathleen. She had the beautiful gray eyes of her race, and her rippling hair was the color of the horse-chestnut, newly released from its husk.

Two or three freckles perched themselves near the end of a pert little nose. Her red lips had the upward quirk at the corners which marks an optimistic nature and a clear conscience. She had bared her plump white arms nearly to the shoulders. The elbows, where they say an ill-natured person is betrayed by acute angles, were as dimpled as a baby's cheek.

"Sure," smiled Kathleen, as she gave the dough a final pat, preparatory to cutting it up, "neither has asked me, and it's three years to leap year."

"WHY DON'T YOU MARRY EITHER JIM McGUIRE OR BARRY FOX?"

"If you'd give one or the other a chance, they would," retorted her mother, more mixed on her pronouns than her reasoning.

"They're both nice boys, and see how bad one would feel if I married the other."

"See how bad they both feel now. Sure, they sit and glare across the table, scarce eatin' a mouthful. They race like wild min three times a week, till I'm afraid a train will come bouncin' off the track and right through me house. You should stop this shilly-shallyin' and marry one of them."

Kathleen turned about and wagged a floury finger impressively. "Mother," she said, in a deep and measured voice, "I will marry one of them before—before twenty years from to-day."

She laughed so roguishly at the attentive face that her mother had turned upon her that Mrs. Donovan smiled in spite of herself. Then the widow said: "Aw, go on wid you!" and attacked the potatoes with renewed vigor.

Meanwhile, Timmie Cassidy and the faithful Spot waited for the coming of Jim McGuire. For Jim was Timmie's hero.

Sometimes Barry Fox tossed Timmie a dime on pay-day. But Jim was more free with his money. And, besides, every other evening, when the engine was in the roundhouse, the little cripple was hoisted to the engineer's shoulder for a ride to his own door.

It was only a step, to be sure. He lived next to Donovan's, and he never went farther than the tracks to wait for Jim, but an hour's ride in the finest automobile in Antioch could not have made him happier than the brief journey on Jim's shoulder.

Really, it was quite an adventure. Spot carried Timmie's crutch in his teeth, and walked ahead of them with great dignity. Timmie needed both his hands, you see, to cling to his steed. One thin little arm went round Jim's neck; the other clutched his head. Then, when he had placed Jim's cap, much too big for him, on his own head, Timmie would order briefly, "Buck!"

And how he did buck! It took considerable horsemanship to maintain his place while Jim pitched and kicked and snorted, to say nothing of tickling a fellow in the ribs occasionally, which surely no self-respecting saddler ever did before.

Those rides were bright spots in the life of Timmie, who couldn't play ball with the other boys on account of his twisted limb. They made Jim chief among Timmie's heroes.

Not that he didn't have other friends, though. There was Kathleen, who was always petting him; and Mrs. Donovan,

who had a way of inquiring gruffly if he were hungry, and then stuffing him with choice bits from the boarders' table.

And Spot! Why, he couldn't get along without Spot. The dog always listened with grave comprehension while Timmie detailed at length what he intended to do when the doctors fixed his leg so he could run and skate like other boys. Harnessed to a little red cart, Spot drew him about for hours at a time, and always slept at Timmie's feet at night.

This evening Timmie's steed was strangely docile. The jouncing and tickling that usually left him helpless with laughter were missing. Almost in silence Jim swung the crippled lad to his shoulder, and after a few half-hearted bucks set him down on his own step. And Timmie, with dark moods of his own to live through, understood that something was wrong, and asked no questions.

"NEITHER HAS ASKED ME."

III.

A good deal was wrong. Jim was ashamed, and furiously angry—ashamed of himself, and angry with Barry Fox.

The engineer of the "Aunty," smarting under the defeat which Kathleen had seen administered, waited outside the Divide roundhouse on purpose to quarrel. And they had quarreled. No blows were struck, because Barry, big as he was, thought it best to speak no "fighting" words. But he had badgered Jim into a dispute over Kathleen.

That was why Jim was ashamed; that the girl he loved should become, even though not named, the subject of bickering between them.

He felt that he was as much to blame as Fox. He should have walked away and refused to quarrel. Thus he would have avoided the proposal Fox had made, namely, that they race the three "out" trips next week, Tiverton to Antioch, the loser of two heats to change boarding-place and relinquish all claim to Kathleen.

Not that Jim feared the outcome of the race, but to bargain for dainty, bright-eyed Kathleen seemed ignoble.

"It's a wonder he didn't want to shake dice or play seven-up for her," growled Jim to himself. "And I was so mad, I'd been fool enough to take him up. Racin'! Racin' for as nice a little girl as—as ever wore tan shoes. Timmie Cassidy's Spot has more decency than that."

Barry did not come home to supper. He was taking the edge off his feelings at the corner saloon. Jim ate about as much as the canary, said "Yes" and "No" three times, and slipped out of doors without a look at Kathleen. Whereat Mrs. Donovan, putting two and two together, turned reproachful eyes on her daughter and grumbled all the evening about "racin'."

It was Saturday night, and, by tacit consent, the rivals kept out of each other's way over Sunday. They avoided opportunities to race going into Chicago on the seven o'clock trains Monday morning. But each spent an extra two hours at the roundhouse in the city Monday afternoon, preparing for the first race Tuesday.

For now that the bargain was made, though his cheeks burned when he thought of it, Jim did not dream of repudiating it. That would not be the way of a man with red blood in his veins. He would make the race. That was the thing to do. And if Fox beat him—well, he'd have to go some, that's all.

McGuire did not underestimate his

rival, for Fox was a good engineer. He was a dark, curly haired fellow, with massive shoulders, and he understood his engine as a good engineer should.

But McGuire, blond and boyish, was also, in the idiom of the road, "some engineer." He pulled levers and tapped valves with the loving delicacy of a master drawing harmony from a violin, but his locomotive ran like a scared deer.

The races were to be "luck o' the road." That meant an even start out of Tiverton, and take your chances from there to Antioch. And luck, in so short a series, would play a large part in the final result.

Tuesday morning there was more careful grooming in two smoky, noisy Chicago roundhouses. Later, as each engine rattled through the wilderness of tracks and jolted over scores of switchpoints to the station, its driver smiled confidently.

They pulled out of Chicago on the minute, and Fox whistled for Tiverton, a trifle under four and a half hours later, on the second. Then he waited ten minutes, tinkering with a wedge and making ingenious excuses to his conductor, before the Divide train rolled in. Jim had been compelled to pick up four extra coaches down the line. They were bound for the repair-shops at Antioch.

Jim made a game fight, but the extra weight of the limping coaches was too much for him. Barry beat him to Washington Street, although he almost ran the wheels from under his cripples, and tore into Antioch with three hot boxes blazing.

IV.

THAT night, at supper, Fox was flushed and in boisterous spirits. Timmie had a famous ride, to judge by his squeals of laughter, and McGuire came in quiet but cheerful. Kathleen looked at both of them queerly. Mrs. Donovan, who had noted the hot boxes, shook her head doubtfully.

Thursday's race was a hollow victory for Jim. Barry could take small comfort from the fact that a show-troupe had held him at Buckley. He would have been beaten without that.

Came Saturday and the final heat.

Each pulled into Tiverton about five minutes late, which was well. The regular schedule was likely to be too long that day.

As the locomotives came to a panting halt on each side of the old union station—it has since been torn down—the engineers were on the ground simultaneously. They oiled round, tightened a nut here, felt a bearing there—girded the loins of steel for the home-stretch.

The baggage was unloaded. The passengers streamed off and on. Joe Barry, of the Divide, and Wish Sullivan, of the "Aunty," came out of the depot with their orders, chatting amiably together. Each handed a yellow slip to his engineer. Each looked at his watch, and snapped it shut. Their warning call of "All-ll , abo-oo-oard!" blended. Each right hand shot up in signal. They were off!

The passengers settled themselves in their seats with pleased animation. There was going to be a race, all right. *Chuh, chuh, chuh,* said the engines at first; then, as they gathered speed, *chuh-chuh, chuh-chuh, chuh-chuh!*

The engineers "opened them up" a little more, and the firemen in the rival cabs watched the steam-gage anxiously.

Barry's load was a little the lighter, and, besides, his engine picked it up more quickly. He led during the three-mile run to Owendale. Conductors and brakemen were off at that hamlet before the wheels stopped turning. Sam Hollis, baggageman on the Divide, roared terrifyingly, while the air brakes were still whistling, and shoved a big sample-trunk at the agent before that astonished individual could bring up a truck to receive it.

The "Aunty" had one passenger to alight, a little old lady. Now, little old ladies are likely to be dim as to sight and doubtful and hesitant as to car-steps. Rather than see her waste precious seconds, Wish Sullivan picked her up gently as she stood on the platform, walked nimbly down the steps, and set her down on the cinders. When she had caught her breath sufficiently to say, "Well, sakes alive!" he was waving a smiling good-by from the rear platform of the receding train.

The five miles to Buckley was up grade, and they thundered along, neck and neck, every foot of the way. Mc-

Guire managed to make up the two car-lengths he had lost, but that was all. It was a brief stop at Buckley, and again the conductors waved "Go ahead" at almost the same instant.

McGuire had a good fireman, and the safety-valve was popping under a full head of steam. Because his machine was a slow starter, the blond engineer needed every foot he could get. He turned on the sand, and drew steadily backward on the lever.

The big drivers spun round in the sand, shooting sparks like a blacksmith's forge. Then they bit into the rails, and the train fairly leaped ahead. Fox got no advantage in that start. Ahead were twelve straight, level miles—and no stop till Antioch!

Away they went, the smoke streaming in tattered billows behind, the cinders drumming on the roofs of the coaches like hail. The two big locomotives rocked and pitched as though they would leap from the track.

The firemen, sweat streaming from their faces, scattered coal craftily over the glowing furnace of the fire-box. A shovelful too much in any spot might mean temporary smothering of the fire there and consequent loss of time. And steam was needed now.

Fifty-five, sixty—even sixty-five—miles an hour, the flying wheels spurned the steel pathway. And up on the right side of each huge boiler sat a grim-faced man, still "pounding 'er on the back," in railroad vernacular—coaxing each ounce of steam into play, each thrust of the piston into more effective action.

Four miles were gone before condition began to tell. McGuire's engine, handled habitually with consideration, began to creep ahead. It had never been racked as Fox, in black fits of temper, had sometimes racked his by savage stops and starts. Now Jim was repaid; his engine steamed more easily.

Five miles, and Fox had lost a car-length, despite the efforts of himself and his fireman. Six miles, and he was two car-lengths in the rear. Eight miles, and his pilot was lapping the rear platform of the Divide train. Ten miles, and he had slipped back until he was pounding along a hundred and fifty yards behind, hopelessly beaten—or so it seemed.

A mile out of Antioch, McGuire reached for the whistle-cord. He lingered on the long, single blast a moment as he sighted a moving speck alongside the track. A dog—a black dog, with a white patch on his side. Timmie Cassidy's dog, of course.

Dogs do foolish things sometimes—even as do their masters. Spot's evil genius tempted him just then to a foolish act. He looked over his shoulder, and saw the flying train. As if challenging it to a race, he leaped into the center of the track and sped away homeward, a living streak of black and white!

With an imprecation on the playful Spot, the Divide engineer jerked the cord viciously, sending out a volley of short, shrill toots. He knew that unless the dog gave up this dangerous game he would be overtaken and cut to pieces within two hundred yards.

And Spot, every idea driven out of his silly head by the urgent alarm, felt his playfulness of a sudden changed to mad panic. There was nothing to do but run and run and run.

He lowered his tail, and spurned the cinders with prodigious leaps. A single bound sidewise in either direction would have carried him to safety. But he strove only for Washington Street—and Timmie.

Jim McGuire ground his teeth and strained his whistle-cord almost to the breaking-point. Shutting off was out of the question, of course. Barry Fox was right at his heels.

The slightest reduction of speed meant that the "Aunty" train would nose him out of the race—and Kathleen. Spot could be replaced—he would buy Timmie another dog—

Then, quite of its own volition, a picture flashed into Jim's mind: Timmie waiting at the crossing for his homeward ride, the thin little face aglow, the thin little arms uplifted, the pitiful, twisted leg dangling, and Spot carrying the crutch—Spot—*Timmie's* dog!

With something between an oath and a groan, he closed the throttle with a snap, turned on the sand, and applied the air. Bump! The train slackened with a suddenness that almost threw the passengers from their seats. The cars bucked and jumped. The rails squealed

evilly as the wheels slid along, clamped by the whistling air-valves.

At that precise moment common sense returned to Spot's addled brain. With the pilot but a few yards from his tail, he sprang far to the right, and rolled over and over down the steep grade — unhurt.

Instantly, the blond engineer threw everything wide open again, but it was too late. The brief loss of momentum was fatal. While Fox grinned triumphantly at McGuire's fireman, the "Aunty" flashed by in a cloud of dust and smoke.

V.

By ten o'clock that night McGuire had completed his packing and was ready to move. He had decided to put off the hour of embarrassing explanation as long as possible. It was necessary, too, to frame up a plausible story against the coming of that hour. There was no real hurry. He would tell Mrs. Donovan Sunday night, just before the wagon came for his trunk.

THE LITTLE CRIPPLE WAS HOISTED ON THE ENGINEER'S SHOULDER.

The Donovan house has a veranda around three sides of it, well screened by wild-cucumber vines. When Jim came down to get a breath of air—for the night was warm—he gravitated by instinct to the side next the railroad. His sigh as he dropped into a rustic chair was answered by a rustle from the hammock in the darkest angle of the porch.

"Good evening," he ventured.

"Good evening, Mr. McGuire," came a low voice in response.

The "mister" stung like a blow. It had always been "Jim" before. Oh, well, if *she* were going to rub it in— He arose.

"I didn't know there was any one here," he said stiffly, showing his feelings.

But her next words arrested his footsteps:

"So you're going to leave us?"

Going to leave them — how did she know? He had told no one—had not mentioned the significance of the race to a soul. Had Barry asked her already? And been accepted? They had laughed, undoubtedly, over the luck of the road that had beaten him. Well, let them laugh!

"Yes," he said shortly.

"Where to, if you care to tell?"

"To — to Mrs. Masterson's."

He hadn't really decided, and that was the first name that came to him.

"Indeed!" The tone was frigid. Mrs. Masterson had a daughter—a girl about Kathleen's own age. "Why are you going there?" with the slightest possible accent on the "there."

"It's—it's nearer the roundhouse," he stumbled.

"Yes—half a block. That's one reason. Nellie Masterson is another, I suppose. And you lost the race!"

She was sitting up in the hammock now. Into her voice, during that last sentence, had crept a new, thrilling tone. It drove Jim to sit down again.

But when she continued, the thrill had become buried beneath tons of ice.

"You raced for me—*me*, Jim McGuire, as though I was the ten-dollar bill the company gives every month to the man who saves the most coal. You and

Barry Fox! Who gave you the right, Jim McGuire?"

Her voice trembled and broke toward the last. Jim writhed in his chair in remorse and compassion. He opened his mouth to speak, and closed it again futilely. It was all true, every word of it. What was there to say in defense of their conduct? Nothing!

"Barry Fox's fireman told me this evening," she said, her voice under control again. "Barry boasted over his 'victory.' What must folks think of me, Jim McGuire? Me so cheap that I must be raced for by two of my mother's boarders!"

He sprang to his feet again, clenching and unclenching his hands. "For God's sake, Kathleen," he implored, "don't feel so bad about it. I'd give my life to keep sorrow from you. I know I was a fool; but I didn't mean to hurt you."

She was crying softly now, and the sound wrenched his heart-strings. He dropped on his knees beside the hammock.

"Kathleen, darling!" he pleaded.

Apparently the girl took no notice of the endearment, the first he had ever uttered to her.

"You might have found out," she said in a small, forlorn voice, "wh-whether it was n-necessary to—to race or not!"

With a little cry of love Jim gathered her into his arms.

Barry Fox has been known to express, on occasion, his amazement over the fact that the race is not always to the swift.

FRANCE'S FAMOUS RECORD RUNS.

How the Land of the Lily Has Made Marvelous Strides in Railway Speed in the Past Few Years.

FRANCE has a law against the running of trains at more than seventy-five miles an hour in any part of the country, but somehow this has not prevented the French roads in very recent times from breaking all previous European records.

Heretofore Great Britain has been considered the home of the fastest and safest railroading, but France is rapidly winning first place in the former respect, at least; and this notwithstanding the fact that down to very recently the French railroads have been notoriously slow, compared with English and American roads, and that the roadbeds were, and still are, in a poor condition.

The sudden burst of speed on French roads has come about through the stubbornness of French manufacturers. Sure of their home trade, they refused to enlarge their plants or work overtime so as to supply the government railroads and the Orleans Company with engines, and these patrons immediately transferred their patronage by ordering locomotives of the Atlantic type from America.

They had had their eyes on these engines for a long time, envying their speed and strength. A good and fast engine wants a good and substantial road-bed, as well as other important accompaniments. These trifles the French thought they could overlook, and the result was a disaster, which permanently curtailed the speed ambitions of two roads, the Orleans and the Midi.

But within a year French roads were going some. The Sud express, between Bayonne and Dax, was averaging fifty-seven miles an hour, the sixty-seven miles between Morcoux and Bordeaux was traversed in sixty-three minutes, and the whole journey, from Paris to Bayonne, was at an average of fifty miles an hour.

The Paris-Lille express makes what is said to be the fastest time for the distance in the world, the hundred-and-twenty-mile run from Paris to Arras being accomplished in one hundred and seventeen minutes, or at the average rate of sixty-one and a half miles an hour.

Again, the Paris-Amiens train is the fastest of its distance in the world, making the eighty-one miles at the rate of sixty-three and one-fifth miles an hour.

The Orleans-Tours does its seventy miles in seventy-two minutes, the Tours Poictiers cuts away sixty-three miles in sixty-eight minutes, while the Poictiers-Angoulême does seventy-one miles in seventy-four minutes, and the distance between Angoulême and Bordeaux, eighty-seven miles, is covered in ninety-one minutes.

Full Speed Ahead.

The Great Winter Rush Is On, and Orders Are Coming Down the Line Like Competitive Roads Trying To Cop the Mail Contract.

THE Vicksburg, Shreveport and Pacific Railroad, a branch of the Queen and Crescent route, will erect a passenger and freight depot at Bossier, Louisiana.

THE Minneapolis, St. Paul and Sault Ste. Marie has awarded a contract for building two freight-houses at Duluth, Minnesota, to McLeod and Smith, of Duluth.

THE Chicago Great Western has ordered 2,000 steel underframe box cars, 250 steel center sill stock cars, and 200 Rodger ballast cars from the American Car and Foundry Company

THE Louisville and Nashville has purchased some additional land near Leewood, east of Memphis, Tennessee, on which it is reported the road plans to construct freight-yards.

THE Harriman Lines have ordered 815 Rodger ballast cars from the American Car and Foundry Company. Of this number 300 are for the Southern Pacific and 515 for the Union Pacific.

THE Atchison, Topeka and Santa Fe is reported to be in the market for 22,000 tons of tie plates, 12,000 tons of rail joints, and 700 tons of bolts. Later reports state that contracts for this material have been let.

THE Oregon Short Line has authorized the filling in of the gaps in its block-signal system on the Idaho division. Sixty-two miles remain to be filled between Nampa and Reverse, and 136 miles between Bliss and Pocatello. With these gaps filled in, the block system will be complete between Salt Lake and Portland, Oregon.

THE Chicago and Milwaukee Electric Railroad, Chicago, Illinois, is contemplating the purchase of a double-truck café parlor car and three double-truck passenger interurban cars for limited service, five standard, semi-Empire, interurban double-truck cars, four motor, eight semiconvertible trail cars, and one double-truck snow-sweeper.

IT is announced by the Pennsylvania Railroad Company that the general contract for the Greensburg, Pennsylvania, improvements has been awarded to the Millard Construction Company, of Philadelphia, Pennsylvania, and that work is to be started immediately. Plans for this work, which will cost upward of $1,000,000, were published several weeks ago.

PLANS have been prepared for a new roundhouse for the Union Railroad, which is owned by the United States Steel Corporation. The new roundhouse will be constructed of steel and concrete and will be almost double the capacity of the present building. On account of the increased production of the Steel Corporation's plants in Pittsburgh, which has resulted in much heavier tonnage for the Union Railroad, it has been necessary to purchase additional locomotives. The new engines are much larger than those formerly in use, and for this reason the new roundhouse

has become an absolute necessity. Work on the new structure will probably be started early next spring.

THE New York, Ontario and Western will build 500 forty-ton hopper gondola cars. These cars will be built at its Middletown shops. They will be 33 feet long, 8 feet 11 inches wide, and 5 feet 1 inch high. They will be equipped with steel underframes, which have been ordered from the Ralston Steel Car Company, of Columbus, Ohio. The bodies will be constructed with steel frames and wood siding.

THE Houston Belt and Terminal Company has awarded the contract for the erection of a passenger station at Houston, Texas, to the American Construction Company of that city. The plans for the building, which were prepared by Warren & Wetmore, of New York, call for a structure 250 x 130 feet, with floor and wainscoting of marble, electric elevator, electric lighting, electric fans, telephone service. Train-sheds will be 2,700 linear feet long, with steel canopy and tile roofing.

CONTRACTS have just been closed by the Baltimore and Ohio Railroad, with the Patrick Farrell Construction Company, of Cincinnati, Ohio, for extensive shop improvements at Benwood, West Virginia, covering an expenditure of $150,000, and which will practically mean the rebuilding of the Benwood shops complete. The improvements include: 23-stall enginehouse, with turntable and pit 80 feet long, oil-house 30 x 58 feet, storehouse 30 x 70 feet, with platform 20 x 30 feet, machine-shop, blacksmith-shop, boiler and engine-rooms 60 x 184 feet, with brick stack 125 feet high, sand-house 22 x 94 feet, with tower 13 x 15 feet, carpenter-shop 35 x 82 feet, material storage platform 25 x 90 feet, shaving-shed 12 x 33 feet, casting storage platform 38 by 60 feet, pipe, bar-iron and sheet-metal storage racks, 20 x 38 feet, two scrap-bins, 20 x 42 feet and 20 x 70 feet, respectively, locomotive cleaning platform, 19 x 75 feet. There will also be installed a system of water supply and fire protection, and a complete sewerage system.

THE Chicago and Northwestern has given out the following information regarding the 125 new all-steel passenger-cars which that road recently ordered from the Pullman Co. and which are now under construction: "All of these cars are fully equipped with non-collapsible, heavily reenforced steel frames, with the most modern safety vestibules, Westinghouse high speed air-brake equipment, and the latest improved draft gear. The floors are laid with a sanitary composition that adds strength to the car and deadens the noise of the train. Even the frames of the seats are built of steel, and no combustible material enters into any part of the construction. The new dining-cars will have features that are of direct interest to the public. Each car is arranged to seat thirty-six people, which is six more than the usual standard, and special improvements have been effected in the arrangement of the kitchen and pantry, which will insure greater capacity and more prompt service and at the same time remove all odors from the kitchen. The day coaches and reclining-chair cars are to be five feet longer than the largest cars heretofore used, and will, in consequence, have greater seating capacity. The parlor-cars will be of the most ample dimensions, and the interior fittings and finish will be in accordance with the usual luxurious Northwestern standard. Special attention has been given to the sanitary arrangement of all this equipment and it will all be fitted with the latest devices for insuring cleanliness and satisfactory ventilation. The Chicago and Northwestern will be the first Western road to provide all-steel, safety, fire-proof equipment on through passenger-trains.

LAST YEAR'S RAILROAD EARNINGS.

THE gross earnings of the railroads of the United States for the year ending June 30, 1909, were $2,437,385,841, according to the figures compiled by the Bureau of Railway News and Statistics from the reports of the Interstate Commerce Commission.

The operating expenses were $1,611,927,766; taxes, $88,961,475, and net operating income, $736,496,600. The figures for the year ending June 30, 1908, were: Gross earnings, $2,424,640,537; operating expenses, $1,695,101,878; taxes, $83,860,516, and net operating income, $645,678,243.

The average mileage covered by these returns in 1909 is 230,099, against 226,121 in 1908, an increase of 3,978 miles. These figures show an increase of $12,745,204 in gross earnings and of $90,718,357 in net.

MABEL ON A MOUNTAIN.

BY CROMWELL CHILDE.

Sometimes It Pays to be Snowed In, Even If It Does Happen on Your Wedding-Day.

BOB TAINTOR cursed at the snow-storm that was settling down thicker than ever. Any man would who had a bride coming toward him as fast as steam could carry her. There he was in Denver, holding down his job as private secretary to Ephraim Babbott, president of the Denver and Western, and she — Heaven knew just where or how—with this snow growing into a great white torrent.

To-morrow was to have been their wedding-day. At 9.13 that morning Mabel was to have taken No. 4 out of Glenwood Springs. It would have come into Denver at 10.35 that night. The next afternoon, under a bower of white roses in her sister's parlor, she was to have become Mrs. Bob.

And now! No. 4 had left Glenwood Springs reasonably on time. The storm had not held her back materially; though it was slow running, even with two engines, until, up over a very heavy grade, she entered the cañon of the Grand River, mounting toilsomely toward the gaunt gray peaks on the west side of the range.

The little clock over the secretary's desk had its hands at four. There had been no word from the despatcher's office for two hours. Nervously, Bob Taintor went over to the operator, just outside his door.

The *click-click,* repeated many times over, seemed to bring Mabel nearer to him. She had been a telegraph operator; in fact, it was only the night before that she had ceased being one. He remembered how pretty she looked the first time he saw her in an office at Glenwood Springs. And what a little witch she was with a key! It was not so long ago that he had handled a key himself. By pure luck, Babbott had happened to run across him and set him on his feet, in direct line for promotion. A hundred a month now, and Bob saw visions of many things.

There was no need to ask Maguire any questions. *Tick-tick,* a message came, and Bob read it in the clicks of the Morse:

> Manton. Four passed 3.45. Conductor says cannot get much farther. Going to try to make next station. Snowfall increasing.

"There won't be a wheel turning soon," said Maguire. "Not a hundred and fifty miles west of here, at any rate."

Restlessly, Bob went back into his office. It was fortunate, perhaps, that President Ephraim Babbott was in Chicago, for he would have had a somewhat unfavorable impression of his young secretary. The young man he had liked so much, because of his cool, collected air, was cool and collected no longer.

"I don't—" he began, pacing the floor worriedly. "No, there can't anything happen. I don't know, though. By Godfrey, to think of that blessed little scamp up there in the cold!"

He took another turn up and down the room. He seized a picture from his desk and took it over to the window. The thick rush of whirling snow blotted out all but the very nearest buildings.

It proved a good guess. At seven o'clock that night, after countless telephone messages to Elsie, Mabel's sister—who hourly got more and more worried, and who bewailed the white satin and duchesse lace wedding-gown laid out on her spare-room bed—the operator at Ivanhoe was heard from.

He told how No. 4 had manfully pushed through the desolate storm-bound

THE YARD FORCE SAW ITS BURLY TRAINMASTER GO DOWN INTO A SNOW-DRIFT.

The photograph showed the saucy, piquant face of a dainty blond girl that any man might be proud of winning. Bob groaned as he thought of what was to have been at half past ten that evening. He could seem to see her stepping from the train in the Denver depot.

"Busk wires Three, due there 4.50 this morning, snowed up two hundred feet from station platform," called out Maguire, poking his head in at the door. No. 3 was the west-bound Transcontinental Express.

"Looks like my wedding to-morrow, all right, all right, Jim. Four'll get just about to Ivanhoe, and'll be doing darned well at that."

bleakness above the timber line, and had finally been prisoned in huge drifts just at the tunnel's mouth.

Ivanhoe is a platform and an operator's shanty—only that and nothing else—two hundred and twenty miles west of Denver, so high up in the peaks of the Rockies that forest fires, snow slides, and never-ending cold have left only the grim, bare rocks and a series of wonderful views for the traveler. From Glenwood Springs, under the most favorable of conditions, it takes four hours for a train to climb the grades, just sixty miles.

Over the summit of the range, toward Denver, lies Busk. The ingenuity of

man was called into play here. Mountain-climbing must come to an end. Instead of further twisting and more serpentine coils among the rocks, they bored the mountain. The Busk tunnel, three miles long, is the result. It was at each end of this that a train was stalled, that farthest away with the pretty bride-that-was-to-have-been among its passengers.

No. 4 had five cars—a baggage-car, a mail-car, a smoker, and two day-coaches. Old-fashioned Baker heaters kept the day-coaches and the smoker reasonably warm. At seven o'clock at night, when the drifts on the mountain-side just at the entrance to the tunnel finally blocked the way, everybody was still comfortable. The well-filled wood-boxes made it certain that no one would suffer for a good many hours.

"You know better, man," said Rafferty, the trainmaster, his mustache icicle-covered after a tour of the yards. "Get to Ivanhoe! You couldn't get fifty miles from here to-night. You're enough of a railroad man, Bob, to know when to keep your shirt on. No. 4's all right. Your little gal's O. K. She's prob'ly playing bridge whist now with some o' those nifty Chicago drummers."

Rafferty did not lose Bob that night. Until gray dawn—a dawn far grayer than usual because of the snow whirling faster and faster—both sat listening to the tale of train after train coming into Denver hours and hours late; and of others, far away in the mountains, snow-bound beyond all help.

Not a single wheel, finally, was turning. But long before midnight the private secretary had ticked off two messages to his sweetheart held tightly on the mountain-top, and received one from her. Sloan, the Ivanhoe operator, most obliging of fellows—who had a girl of his own and, privately, thought Bob a prince—had carried the messages through two hundred yards of blinding storm to the train and Morsed back Mabel's penciled scrawl:

> Don't worry. But you're horrid if you don't. Isn't it awful! But I'm just as comfortable as anything. Dearest love!

Everybody on the train pooled for a dinner, the remnants of the luncheons which some with wise forethought had brought. They made a gay little party. Rafferty was right in part of his guess. There were two drummers from Chicago aboard. A manufacturer from Kenosha, Wisconsin; a woman in widow's black, a Swede farmhand, a pair of prosperous-looking farmers, a German frau, with two pig-tailed little girls; a Denver business man, and a Glenwood Springs lawyer, spruce in the extreme, were very much in evidence.

The wood-boxes still showed brave heaps of chunky logs. If any one worried down in his heart, he did not let the others know. But Simpson, conductor, after he had fought his way over the tender and peered at the mountainous drifts in front—seen through a swaying curtain of almost opaque white—had his thoughts.

To the people on the train, to Rafferty, and a certain ardent young man in Denver, the morning brought a realization that No. 4 was in for it. The storm had not stopped. Let alone getting out to the foot-hills, it was impossible to move trains close to Denver.

"Tied up a heap worse, Bob, than we were last night," said Rafferty at nine. "Keep your mind easy, though, 'bout the kid. Jack Simpson's a dandy; you can trust *him*. 'Bout this time to-night you and me'll take stock an' see what we can do. It's no cinch, though, those rotaries are goin' to have."

"You're a good fellow, Raff," said Bob, "but—I must get out. I must, I tell you. I—"

"How you're goin' to?" cut in the trainmaster. "Go out on a rotary? Try it, Bill. Get aboard. Take the first one. But, say, wait till you get stuck in a drift fifty miles from nowhere. Where'll you be then, hey? *Now* you can wire straight to the lady. You can spoon that way a lot. 'Course it won't be up to a parlor, with the gas down, a holding one of her little hands. Oh, I've been there!"

"Shut up!" And, to its utter demoralization, the yard force saw its burly trainmaster go down into a snow-drift, to be well mauled there by the wiry, athletic private secretary until he cried for mercy and promised to devote all his skill in rescuing Mabel.

That young lady had had a capital night's rest. Mabel was never Miss Worry. She took what came in her simple, pleased, girlish way. When she had been given her place as operator in Glenwood Springs it was the most delightful piece of luck she ever knew. When Bob proposed she was the most fortunate girl on earth.

The faithful Sloan made his appearance by eight o'clock. This is the message Mabel gave him then to tick off to the private secretary:

> You're not to worry a mite, Bobbie. (Have you written that all down, Mr. Sloan?) Warm as toast! Lots to eat! (Now we *will have,* Mr. Station Agent, don't you leave that out). Awfully nice people, especially the Ivanhoe operator, who's terribly handsome and has big blue eyes. (Don't you dare get that wrong). Now be jealous! (Yes, you *can* send all that). Good-by,
>
> BOBSY.

Her little hand reached out for the pad and pencil that Sloan held.

"Here, I can't talk the rest of it."

She wrote a few words rapidly, then folded the sheet over. When Sloan got at his key and started sending, he found the words below his own were: "And God bless my boy."

Mabel had taken one of the pig-tailed German girls to "bed" with her, cuddling the plump small body close in the uncomfortable seats. She had begged the child from its mother, and by the time she had washed and dried the two youngsters' faces in the morning she was a close family friend. When Mrs. Helmzwitter heard of the balked wedding plans, and had seen his picture in the locket around Mabel's neck, she became enthusiastic, sympathetic, commiserating, hopeful.

"*Ach, lieberchen,*" it vill coom all right. Such a be-youtiful yunger man. He is like mine Heinrich vhas, but not so fat. You vill be von happy *mädchen, Ach,* so romantistic, *es ist wie Goethe. Aber,* vill, you t'ink, railroads be so gute a business as butchering?"

Mabel raised the brightest, proudest face to her new friend.

"HE IS LIKE MINE HEINRICH, BUT NOT SO FAT."

"Oh, Mrs. Helmzwitter, don't you know? Course you couldn't, though. Bob gets a hundred a month now—a hundred—just think! Isn't that a lot? And it's just a beginning. He's going to be president of the road some day, unless the Pennsylvania or the Great Northern want him first."

"I felt just dot vay mit Heinrich," put in Mrs. Helmzwitter, hugging Gretchen and Hilda together in one capacious embrace. "A voman vants to t'ink dot off her man effry time."

"I DON'T KNOW YOUR NAME—ONLY PART OF IT."

It could not long remain a secret that a near-bride was aboard, and congratulations commenced to shower. It was the Swede farmhand, however, who first rose to the occasion and perceived the proprieties. He mumbled, "Ay t'ank congrats," awkwardly, and stolidly shuffled to his seat.

In the bustle about the pretty girl and amid the flowery speeches of the two Chicago drummers, the Denver business man, and the Glenwood Springs lawyer, nobody noticed that the Swede was digging down deep into his clumsy bag. Nobody even thought of him until his lanky form edged its way between the enthusiastic drummers.

"Ay vant," he began stammeringly, "to gif yo' dis. Sophie, she vould say, 'Gude boy, Yonnie.' Ay got it for her." And he laid in her hands a big, bright breastpin with gaily colored stones.

The bride's eyes filled with happy tears. Was the whole world as good as this? Why, it wasn't only Bob who was a dear. Everybody was that, with but Bob the nicest of all. She sprang up and reached out both her hands for the "jewel."

"Thank you! Thank you!" she cried. "It's just the most splendid thing! I don't know your name—only part of it. I'll call you by that. It's fine, Yonnie—fine!"

Her hands went into the big paws of the Swede, and held them tight. Having made his speech, Yon could only grin happily. Clumsily shifting his feet, he stood there, one great mass of satisfaction.

Cheers embarrassed him further. The passengers slapped his shoulders vigorously and shouted: "Good man, Yon! You're all right!"

"Ay tank she like it," said Yon, beaming, after the noise had subsided. But he was not to hold the center of the stage. The Denver business man sprang forward.

"Shall he beat us, boys?" he yodeled. "No, not for me! He may tie us, but he can't beat us! I'll bet this crowd's got sporting blood! Get busy, boys! Get busy!"

He rummaged in his pockets and dropped back into his seat. In a moment Mabel was completely deserted. Every man and woman suddenly became absorbed in the mysteries of their bags. The Denver business man was the first to emerge. He approached Mabel with a courtly bow.

"There never was a bride on her wedding-day," he said, with a laugh, "who could see her presents straight. This is a dozen solid silver spoons."

Into her lap he tossed a folded slip of paper. It was a check drawn to the order of "Cash."

The woman in widow's black leaned over the seat with a tiny embroidered handkerchief done up in tissue-paper, and she timidly kissed the little bride. The youngest Chicago drummer had

made a flying rush for the baggage-car. He came back on the jump with a lavender kimono. "Only thing good enough I've got with me," he told her. "It's from stock, but I'll fix that all right with the house. You may have to clean it up a little."

"I'm in builders' hardware," the second drummer announced, after an unsuccessful search through his grip. "Nothing tasty among my truck like Crawford there's got. But that's easy to fix." He scribbled on a piece of paper and handed it over:

One Morris chair for library coming. P. Kurtz, with J. Salomon & Brothers, 1634 Wabash Avenue, Chicago.

Then the four Italians in the smoker seemed to understand. If they knew any English, no one could tell it. They jabbered enthusiastically among themselves, went back into the smoker, and finally returned with four brilliant headkerchiefs—a glory of purple, red, yellow, and blue.

From his valise the Glenwood Springs attorney presented a book, fresh in its original wrappings. The farmers came up with diffidence. They had been consulting together earnestly. "This has caught us at a bad moment," they told Mabel. "We've nothing in our bags for a lady."

"When you start housekeeping, though," said the larger of the two, "every little thing counts."

"At any rate, these'll save your husband some money, and you can spend that money on fixings for yourself," continued the other.

They laid before her a safety razor and a necktie.

Mrs. Helmzwitter produced a knitted shawl that Mabel at once wrapped about her shoulders. After much whispering, Gretchen and Hilda shyly approached. Behind each little back was a hand.

The little hands came out, and each held a small dolly. Mabel grabbed and took into her arms both girls and dolls.

"You darling darlings!" she cried.

A cold blast, the slam of a door, and Conductor Simpson blew in.

"Me the Pierp Morgan when it comes to the eats," he announced. "Trust your Uncle Jack for the commissariat! Beginning to get hungry, I guess. Lunch-baskets pretty empty, and it's nearly breakfast-time. Boys and girls, we sha'n't starve. Breakfast's all in shape. Dinner and supper provided for, too. What's this?"

He wormed his way into the group. By this time Mabel was happily crying. In chorus, every one explained.

"I'll be swiggered!" said Conductor Simpson. "So she's a bride—or as good as one—and Bob Taintor's bride at that! Say, the Denver and Western's got to come in. Never do for the road to be left out on this sort of a deal. Ladies and gentlemen, the president is not among us. A number of the other high officers are not. I am the ranking official present."

The Denver business man started the applause.

"At the moment we are a bit handicapped," went on Simpson, "but we'll do the slickest we can." He pulled his knife from his pocket and detached a little charm from his watch-chain. "With best wishes," and he placed it in her hand, "for the Mrs. Bob Taintor that is to be.

"And now," continued Jack Simpson, "this is what I started to tell you. It's no wayside picnic, this. Not to-day, nor yet to-morrow, nor for several days are we going to get out of these snowdrifts. Some folks might go hungry. But No. 4 has always been a cracker-jack. She keeps up her reputation—see?

"Say, I ain't joking. In the baggage-car there's a slew o' game-chickens and a mess o' bottled beer. Also—and if one o' you ladies is willing to do a mite o' rustling—there's a bag o' flour."

It was then that the woman in widow's black proved herself the most useful. Drafting Mabel as a helper—"to get you in practise, my dear"—inside of twenty minutes she produced over the Baker heater what Drummer Kurtz called a most superior article.

Drummer Crawford plowed through the snow to Sloan's shanty with a three-cornered note from Mabel, on receiving which the infatuated operator rashly handed over all the salt he had and offered everything in his supply cupboard.

"TO GET YOU IN PRACTISE, MY DEAR."

"It'll be a ten-day job to get those people on No. 4 down here, Bob," said Rafferty late that afternoon, after he had thoroughly sized up the situation. "Early to-morrow I'll get the rotary moving from Tremlow. Boy, th' drifts is fierce up there on th' range. You don't know how bad it is. I'd stay here if I was you. You ain't a mite nearer to th' gal, kickin' round in th' snow. There ain't no chance of getting up to her, 'less you could fly. I know how hot you feel. I'd be th' same if 'twas Mamie there. Get busy on clearing the road. Now's your chance, with th' boss in Chicagy. Good boy, Bob."

Bob Taintor was no ordinary man. All that night, alongside Raff, with his clothes never once off, he worked as he had never worked before. A new spirit was given to the force. The morning saw promise of a road that was to be clear in record time.

At least twice a day, with the tireless Sloan the angel of the wire, there were coming in the snappiest clicks gay messages from Mabel.

Rafferty was right. It was going to be a ten-day job. Bob had been hoping against hope. From Tremlow, on the edge of the foot-hills, they sent out a rotary the second afternoon.

Before dark it was ditched. As a good railroad man, Bob mustered up his courage and tried his very best not to be downcast.

On the third morning a second rotary went out from Tremlow. For a while the anxious waiters in the trainmaster's office got good reports. She made Pilkington; and, as she slowly passed out of sight from there, she was still keeping the tracks.

That was all the news that had come to them for hours.

Then, just at dusk, Leaston, the next

station beyond, got the trainmaster on the wire:

Rotary ditched half a mile east of here.

"Our last bag o' tricks?" snorted Rafferty. "Not by a darn sight. Wait till you've been a railroad man twenty years, young feller. We're up a tree, that's all. But not for keeps. Didn't I tell you 'twas goin' to be a fierce job? Well, it's only a little fiercer than I thought. Th' next move? Bobby, we're wirin' th' Santa Fe for a 'Jull.'

"Take 'em 'bout forty-eight hours to get it here. We sit down and knit, so far's that end of the road's concerned, till then. Never see a 'Jull,' son, have you? Ain't much more than heard o' one? A 'Jull,' Bob, bores and bores. It's a pippin."

With every assurance of Raff's that the "Jull" was a sure thing and was now coming along the Santa Fe, he flashed the news to Mabel by the faithful Sloan. The bride read the wire slowly. Sloan stood waiting her orders, for they had become a very important part of his life.

"A week," mused the little bride. "Poor boy! I couldn't; no, I couldn't wait a whole week longer. Mr. Sloan, do you think I could walk down to the shanty?"

"The wind's the dead limit," was the answer.

"But I must! I just must! It's as important as anything. See here!"

She beckoned to him and whispered rapidly into his ear.

"By jinks!" shouted the delighted Sloan. "Great! Bully! You're a—oh, Miss Mabel, you are— But you don't need to come down there. Honest, you don't! I'll tap the wire right in front of this car and run a line right in here. Then you can—"

She leaped to her feet and put both her hands on his shoulders. "You're the best that ever was, next to Bob. I'll never forget all you've done; and Bob won't, either." She whispered once more in Sloan's ear. All you could hear was the word, "Three."

The Santa Fe wired it was rushing the "Jull" along, and the reports of its progress from station to station were very satisfactory. But the inaction was telling on Bob. What might have happened in another half day no one can tell had not Ivanhoe called him.

The speedy fingers of Sloan hustled along:

Mr. Taintor, Miss Mabel says for you to marry her at three, to-morrow. Bring along the Rev. Mr. Shillaber, her sister Elsie, and any one else you like. Have them all in your office at three sharp.

Don't stop us! I'm not crazy! She isn't either! M-a-r-r-y y-o-u, that's what I said. Perfectly simple and O. K. I'll run a wire in the car, and she'll use it herself. Certainly she can. It's her own suggestion.

Now here's a special message from her to you: "I've found a way, Bob. It's elegant. By this time to-morrow night you'll have a wife. Do just what Mr. Sloan says. From

"Almost Wife."

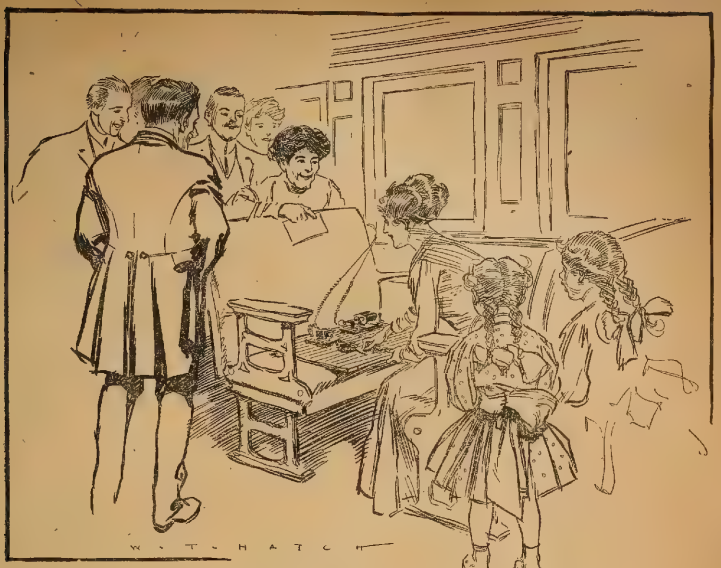
Sister Elsie thought Mabel was out of her mind. Then the romance of the situation struck her, and she began to smile.

"It's perfectly lovely, Bob," she expatiated. "You and Mabel'll remember it all your lives. And just think that Dick and I were married in an old parlor, with two bridesmaids and two ushers, with wedding-cake and the Lohengrin march — just like everybody else!"

She swung the baby up and down until it crowed gleefully. "Don't you wish, Poppums," she asked it, "that your mother had been married in such a killing way as your nice, pretty Aunt Mabel's going to be? *Yum—yum—yum!*"

"I'll get Dr. Shillaber, Bob," she went on. "And I'll not tell him what's up. Won't the dear old man be surprised? My, I'd be—"

Sloan had eight devoted assistants the next morning concerning a line with the first day-coach. Everything at the key was made ready for the bride's own hand. She had asked Gretchen and Hilda to be her bridesmaids, and had even found some white ribbon in her satchel to give a wedding-day air to their braids. The men of the party held a meeting, and unanimously chose the



"OLD DR. SHILLABER WON'T MARRY US. DID YOU EVER HEAR OF ANYTHING SO HORRID?"

Denver business man to give the bride away, if she were willing.

"My dear," said that gentleman, as he looked into the blushing face, "may I have that honor?"

She dimpled as she answered that she "would be so glad." Then, all the preparations being complete, they lunched on the same old menu of game-chicken and bottled beer.

Proudly Mrs. Helmzwitter and the woman in widow's black took upon themselves the functions of unofficial "mothers" to the bride. As they were brushing and patting and pulling here and there, Mabel was called to the wire.

She knew it was Bob, and she shivered a bit; for she felt, somehow, it must be bad news. It was not three o'clock. Why should he call?

"I'm a silly girl," she said, and she went trippingly over to the key. *Click-click!* rang out briskly. *Click-click-click!* Her hands fell despairingly into her lap.

"What do you think?" she cried. "Old Dr. Shillaber won't marry us. Did you ever hear of anything so horrid and mean? Bob can't make him. Just listen."

Click-click-click! Click-click! "Bob says he doesn't *know* I'm here. He doesn't *really* know. He can't see me, can't hear my voice. He says it may not only not be Mabel, but perhaps a man this end of the wire. He can't marry that way."

On her own account she clicked away sharply, calling out the message she was sending. "Tell him, Bob, it's me; that you know it's me, Mabel — he knows Mabel—right here and all ready to say 'yes.'"

Click again from Denver, after a few seconds' wait. Click once more! *Click-click!*

"Oh, he won't—he won't! He says he can't." She turned around and faced the anxious faces behind her. "Well, I—"

"Send a message for me!" angrily

exclaimed the Denver business man, pushing to the little bride's side. "'Dr. James Shillaber'—I know Shillaber well, and I won't stand—I—"

"Wait," said the bride. "Please let me. Perhaps a minister—I've an idea."

Her dainty fingers fell on the key and made it fairly scurry. She talked as she sent:

> Bob: Never mind him. Get on your phone. Send for a justice of the peace. Try to get John Buckner. He'll do anything for me, I'm sure. Explain it all quick. Tell him to hurry.

Two minutes—four—five. Then the nervous clicking again.

"He's coming! He's coming! Bob says. He answered back, 'All right! Oh! It's hard to wait!'"

She slipped the locket from her neck, and, opening it, laid the picture of Bob before her. The Denver business man put his arm about her shoulder caressingly. She smiled up into his face.

"You're all so good!" she told him. "Come here, dears!" She beckoned the two tiny German girls to her side. Their mother petted her arm encouragingly. The clicks began again. The borrowed father softly stroked her hair.

"John Buckner knows it's me," the bride called out entrancingly, after she had clicked back once or twice. "He's been an operator. I am sure that he can tell my touch."

Almost dreamily now she followed the clicking that went on and on, saying a word here and there that told the listeners how the ceremony was progressing.

Click-click-click! and more came over the wire. "Will you take this man—" she breathed. Her fingers instantly pressed down her sender.

"Yes!"

There was a whirl more of clicks back and forth. You could seem to tell of the joy on the wire. The Swede, the drummers, the German *frau*, the woman in widow's black, the farmers, the elegant Glenwood Springs lawyer, Jack Simpson, and the Denver business man deliriously congratulated each other. At length the bride sprang up, her face aglow.

"Everybody remember to say 'Mrs. Bob' now," she laughed gaily. "She's all here but the wedding-ring. Bob's bringing that; and John Buckner's coming with him, to see that it's put on right.

"We're going to have the loveliest, most romantic wedding breakfast, and you're all invited. Bob and John Buckner are going to follow up the 'Jull.' They're coming with toboggans and snow-shoes, and'll get us down the mountain on those. What do you say to that?"

STEEL TIES IN EUROPE.

CONSUL H. ABERT JOHNSON, of Liegè, states that in many of the leading industrial countries of Europe the steel railway tie is largely being substituted for that of wood. The consul says further:

When these ties are carefully constructed in order to meet the demands of the modern railway traffic, they are in general favored on account of their superior solidity and power of resistance. Nevertheless, their high price, certain defects in form, and the absence so far of a convenient and simple mode of attachment have prevented in a great measure their general adoption, although they are being more extensively utilized.

It is asserted that the English manufacturers have on the market a tie "profilé en rigole" (grooved section) that sells for $30 per ton, or less than the present cost of wooden ties. It is evident, therefore, that under these conditions the use of the steel tie would produce decided economical results for the railways.

A good steel tie of moderate price is urgently needed by the railways of Europe, and the prospect of supplying such a demand might be worth the consideration of American steel works. The adoption of metal ties is especially necessary in certain localities to prevent the rapid destruction of forests. It is estimated that in Europe a mile of railway line requires about 2,500,000 cross-ties every twelve years, which means the cutting of an enormous quantity of forest trees. It is also estimated that the railways consume something like 40,000,000 ties a year, and this consumption is said to be increasing at the rate of 3,000,000 a year.

Letters of an Old Railroad Man and His Son.

BY HERMAN DA COSTA.

No. 1.—JIM GETS A JOB IN THE GENERAL MANAGER'S OFFICE ON HIS DAD'S OLD LINE.

Some Good Men Run on the Sidings, but There's a Reason Why They Are Never Able to Pull Out on the Main Line Again.

From Jim to the Old Man.

DEAR DAD: As you see, I got here safely. I went right up to the Young Men's Christian Association, and they put me next to a boarding-place, and gave me the glad hand. I pay five dollars a week for all the comforts of home.

The comfort I like best about it is the landlady. I'm the only boarder she has got, and she's always running up to look after me.

I wandered around town the first few days, looking for a job. That's what you have to do here. They don't come to you. I guess I went to as many as thirty places a day.

Of course, the work was somewhere; it was merely the looking for it. But I tell you, it must be tough luck looking for work when you begin to lose confidence.

I finally landed a job in the B. and G. I walked into the general manager's office, and sat outside the rail for about fifteen minutes, waiting for somebody to come to me. People came in and out the gate, would look at me, and rush on again; so I got tired waiting, opened the gate, and went in. A big fellow was sitting in a corner of the room.

He looked like the boss, so I went over to him and asked for the general manager. He asked me what I wanted. I told him a job, and gave him my name. He thought for a minute.

"Know anything about stenography?" he asked.

"I studied stenography and typewriting."

"Can you do the work?"

"I think I can."

He frowned. "Are you sure you can?"

I saw what he wanted, so I said: "Yes."

He made me sit down and take some letters, and got me to read them back to him. It's enough to rattle anybody, getting up against that kind of proposition, and I told him I wasn't sure whether it was a fair test.

"I am," he says. "We want a man here who can read his notes in a hurry when they're wanted, and not have to gallop between his desk and mine, asking if I said this, and if I didn't say that. I pay him to do my work. If he needs assistance on it, then we'll hire his assistant—and let him out."

That was going some, wasn't it? Well, I made a bluff at it. Then he got me over to the typewriter. I knew I had him there, with all the practise I had. He gave me two or three letters on the ma-

chine. Then he asked me if I knew anything about telegraphy.

I told him, "A little."

"Are you willing to learn it?" he said.

"I am willing to do anything that will get me a job in this office." I was beginning to see what he liked.

He smiled at that, then got me over to his desk and dictated about twenty letters to me. Then I had to go to the machine and write them. When I had finished, he was out of the office.

I noticed that things were rather mixed up—letters lying around loose on his desk, ink-well without ink in it, dust everywhere. It looked a mess, and I pitched in and straightened up the desk, dusted it, cleaned and filled the ink-well, fixed some clean pens, and sharpened some pencils for him.

Then I piled my letters in front of his chair. By that time he came in. He looked at the desk, looked at me, then sat down and began running over the letters. I only made about ten thousand mistakes in those twenty letters. That is, I was watching him, and he would read a little way, grab a pen, scratch, lift up, read a little way again, scratch, read, scratch.

I wanted to get my hat and get out before he jumped on me as the rottenest stenographer he ever saw; but something tied me to that chair, and all I could do was to look miserable. Then he threw me the letters.

"Address envelopes," he said. Not another word. I picked 'em up and addressed the envelopes. There weren't as many mistakes as I expected, but there were enough. I took the letters back to him, and reached for my hat.

"Wait a minute," he says. "We don't quit work here till five-thirty."

While I was getting that through my head, he had picked up another letter, and was starting to dictate it. I grabbed for my book, and managed to get it. He gave me about thirty more letters, and I did a little better with them, for there wasn't so much scratching when he signed 'em up.

About five-thirty he swung around in his chair.

"Britt," he said, "the hours are from eight to five-thirty; practically, we work until we finish. The pay is sixty dollars a month. And, listen: you mean well, but please leave my desk alone. You'll have enough to keep you busy at your own work."

I was thinking.

"What's the matter?" asked Connolly. I had heard somebody call him by that name. "Don't like the work?"

"No," I said slowly, "I wasn't sure—that is, I was thinking whether I could do it."

"Leave that to us. I'm paid to find that out. If you can't, I'll fire you in a week. And, let me tell you something else. Be a little more sure about things. It sounds bad to hear Billy Britt's son talking like that."

Say, dad, that knocked me in a heap. I had forgotten all about your working for the B. and G.

"I'll take it, and thank you, Mr. Connolly," I said.

"No need to thank me, as long as you do the work," he says.

It hasn't been as hard work as I thought. There are about six people in the office besides Mr. Connolly and myself. I'll tell you about them in my next letter. And, dad, I saw T. F. He's a six-footer, thin-lipped man, with blue eyes that look like two dots of steel. I like him.

I've only made one bad break, so far. A man from the superintendent's office rushed in here the other day, and wanted to know if the peach-train was to be run extra over his division. I wasn't sure, but I had seen some correspondence about the peach-train running on 22's schedule, so I told him to run it as 22.

He grinned, and hunted up the C. C. Afterward the C. C. came to me and told me that if I wasn't sure about anything in future, to ask him first.

Afterward I found out that 22 was an evening passenger, and if it had run on 22's schedule the fruit would have had to be re-iced.

The general manager's office is the biggest place on the road. I'm glad I got in it. Every one has to come to us for instructions. I've noticed lots of things that could be improved around the office, and am making up a list of them. When the time looks favorable I'll show it to the chief clerk.

Give my love to mother, and write me when you get the time.

Your affectionate son,

JIM.

From the Old Man to Jim.

DEAR JIM: Your mother and I were glad to get your letter. And we were more glad to know that you had landed a job in the office. Not that the office is better to learn in than the yard—eighty per cent of the men that ever succeeded in railroading started in the yard or somewhere on the division—but you will be able to get in touch with operating headquarters, and inspected by the men who run the road.

HE LOOKED LIKE THE BOSS, SO I WENT OVER TO HIM.

One thing, however, you want to remember—you are waiting on the siding, as yet. Because you are in the general manager's office don't mean you have the right of way over the entire division.

The average young fellow that gets in the office that runs things is apt to believe he's a mogul, and capable of showing things to a switch-engine; but the switch-engine does a heap of work, and the mogul is mighty expensive.

When I used to run 84 up to Wayne Junction twice a day, there was a young fellow in the general superintendent's office that thought, because they let him write letters to the superintendent about delays to fast trains, he was in charge of the line. Imagined he was the cheese.

One day Bob sent out a long letter, demanding a reason for 84 stopping at Bull's five minutes for a hot box. The whole bunch of correspondence came to me, and after looking it over I went up to T. F.'s office when 84 came in. T. F. was superintendent at that time, and had a reputation as the best man on the B. and G. to work for.

Incidentally, T. F. had a string of cuss-words that was a matter of envy for a section-boss. I handed it to T. F., and showed him what the letter was about. He hiked right up to the G. S.'s office.

"Who in the blankety-blank-blank wrote this?" he roared. The chief clerk looked at it, and hollered for Bob. Bob popped up.

"You write this letter, son?" asked T. F.

Bob had seen T. F. before, and knew T. F. had seen him.

"Why, yes, Mr. Fitzgerald. Didn't you see my initials there? And, while you're here, there's some other things I want to haul you up about."

Bobby was getting in his stride. He was going to make a hit with the C. C., he thought. Smart boy!

"Who the blankety-blank are you, anyway?" roared T. F.

Bobby butted in. "Me? Why, you know me. I'm Robert Smith," says Bobby, some surprised that T. F. had forgotten his name.

T. F. was staggered. Then he regained speech. "You are, are you? Well, look-a-here, young man, you seem a blankety-blank sight too much worried about this road. Blank it, who in the blankety-blank-blank is sending that train through—you or me?"

Bob started to explain, when T. F. shut him off.

"Look-a-here," said T. F., "while you're about it, have you got an idea what a hot box is?"

It stuck Bobby. He had never been out in the yards. His idea of a railroad was gained from thrilling stories, where the engineer sticks to his engine and goes down with it in the collision. He was too proud to ask questions, for fear of being laughed at, and too busy with theaters and giggling petticoats to find out for himself.

The delay had looked mighty bad to him from the office standpoint, and he proceeded to jump on T. F. for what he called an "outrageous" delay. There are a heap of fellows like Bobby in the world—too hasty in doing things, and not taking the trouble to find out if they are right before they go ahead.

The funny thing about Bobby, though, was that T. F. had him transferred to his office. The boy had the makings of a man in him, and T. F. put him through the mill. To-day you'll find Bobby superintendent of a division on your road. That's the kind of a man T. F. was, when he got the right material.

Don't you get it into your head that because you're in the office you have got charge of the line. Orders are orders, and the men will obey them when they come right; but it don't pay to call down people when you don't know if you know what you are talking about. Keep your mouth shut until you know. You will usually find that the fellow that knows will keep his mouth shut even then, and only open it when he's called upon. Do your own work well, and you won't have time to volunteer advice about the other fellow's.

The boss has lots of advice about other people's work. He hired you to do your work. Do it. Which doesn't mean that you shouldn't offer good suggestions—but be sure they are good and *wanted* before you offer them.

You don't want to forget that the engine standing on the siding with its steam up is always used. Keep your steam up, and don't use it hunting up other engines to see that they are working right. You aren't paid for that; that's the boss's job.

If he finds you are all right, he will use you for other work besides your own. And you can depend upon it, he wouldn't be boss if he couldn't find that out. He might get along for a little time, if he wasn't in good order; but the chief inspector would soon find it out. And there's where the engine that does its work right gets the main track. Don't depend on a helper; it's all right in a tight fix, but you might get the habit of always wanting one.

This isn't advice, Jim; it's common sense. Your mother sends her love.

Your affectionate

FATHER.

From Jim to the Old Man.

DEAR DAD: What's the point? If I said in my last letter that I had charge of the office, I didn't mean it. It's true I had a lot of suggestions about improving things that I was going to show Mr. Connolly; but one day I asked him why he had taken me, when so many more men in other departments wanted the job.

"Well," he said, "all those other men were primed with suggestions about how I could improve the office, and I wanted a man who didn't know anything, so that I could get a chance to attend to that part myself.

"Mind you," he added, "I like good suggestions; but these fellows didn't look at it from that view. They wanted to make them so that I would see how good they were."

How was that for a close call, dad? After that I've been going ahead attending strictly to my work and trying to make it better wherever I could. Nothing big, you know.

I would copy all the letters during the C. C.'s dinner-hour. I indexed all the letter-books up to date, and tackled the routine correspondence for him. And just yesterday I was standing at the filing-desk when a fellow came in from the superintendent's office and went up to Connolly.

He talked for a while, and then saw me.

"How's the new man?" he asked.

"Keeping his mouth shut, his eyes open, and attending to his own business," snapped Connolly.

"Good!" says the man. But it hit him hard. He was the fellow that had come in and asked me about putting the peach-train on as an extra, about three weeks ago. And, say, dad, you have no idea how proud that made me feel.

I forgot to tell you about my first experience in the office. The first morning that I came to work regularly I was down at seven o'clock. There wasn't a thing I could do. I didn't know how they ran the office yet, or where they filed their stuff, or anything; so I had a lot of spare time on my hands until the chief clerk came down.

I knew what he was thinking. He had me sized up as one of these way-ahead-of-time-for-a-week-and-late-the-rest-of-the-year fellows. At noon-time he came over to my machine, and stood watching me.

"Britt," he said, after a minute, "did I tell you the hours were from eight to five-thirty?"

I guess I got red around the ears, for he didn't wait for me to answer, but walked back to his desk.

T. F. came out of his office the other day, and asked me how you were and what you were doing. Almost everybody knows you, and they seem to think that I ought to know all about railroading in five minutes. I'll have a hard time living up to your reputation.

"LOOK-A-HERE. HAVE YOU GOT AN IDEA WHAT A HOT BOX IS?"

There's a fellow here in the office named John Lynes; black-haired, medium-sized, talks in a contradictory voice. He sings in some church choir. He has taken me in hand, and told me a good many things about people in the office. He explained to me how the schedules are made, too. I guess that's why I like him.

He's been with the road for twenty-five years, and is getting seventy-five dollars a month, adding up columns of figures on tonnage reports. Think of

that, dad! Twenty-five years with the road, and only getting fifteen a month more than I am!

I have often wondered why he hasn't been promoted, for he knows everything about train schedules and things of that sort.

He is awfully touchy; gets mad in a minute if anybody crosses him. Everybody in the office fights shy of him; but at bottom he is a big-hearted fellow, and always willing to help you out if you go to him.

Right opposite Lynes sits Pat Niff; a gray-haired man; used to be on the Monongah division as despatcher; wears a size eight hat. He's got a memory that's wonderful. I don't understand what work he is doing, but it's something about the running of fast freight, and watching them to see that certain cars go through all right.

Pat is something like Lynes, only Lynes will get angry and not speak a word for a week, and Pat will forget he is mad inside of ten minutes. Pat's been with the road thirty-five years, and he gets seventy-five dollars a month. I can't understand it, dad. Here are two men who know as much about handling trains as any man in the office, except T. F., and yet they make one-third of what Connolly gets, and Connolly has been with the road only three years.

There's a big difference between Connolly and those two men. He can get work out of them when nobody else can, and he doesn't know as much about the office details as they do, and I know he often goes to them for advice. I notice, when he does, he asks them for it as if they are able to give it better than anybody else. He usually gets it, too. It's funny, watching the two men give it.

Lynes says what he has to say, and stops. The C. C. will ask him about something of which he isn't sure, and Lynes will explain it. Then, if the C. C. suggests something better, Lynes will get angry, and stick out for his way. The C. C. will try to explain to him, but it only makes Lynes more angry, and finally he won't say anything at all. Really, the C. C. very seldom goes to him, for that reason.

If he asks Pat anything, Pat will keep on talking even after the C. C. understands; and when the C. C. starts to go away, Pat gets up and follows him, still talking, to his desk, and keeps on explaining matters. The C. C. looks worried and annoyed, and wants to tell him to shut up, but can't, and finally Pat gives out, stands for a few minutes at the desk, not knowing what to say; then goes back to his desk, stopping on the way to talk to everybody. When he lands at his desk, he shuffles his papers around, looks up with a pleased smile on his face, and doesn't get down to work for a quarter of an hour afterward.

But, say, dad, I tell you this railroad work is simply great! I like it immensely. I am beginning to take hold in pretty good shape, and Lynes says I am improving right along. I would be a fool if I didn't.

Just last week I started up a system of filing. They have a filing-clerk here, but he's not much good. So, when Saturday afternoon came—we get a holiday then—I persuaded him to let me look over the files, and jollied him along. He's something like Lynes—touchy—so I made him believe that he gave me the idea, and now the filing is in fine shape. I help him out whenever I get a chance from my other work.

There's another thing that ought to be cut out; that's Lynes's work. He could be put on the filing-desk with the file-man; there's work there for two people easily. I'm going to tell the C. C., when he is in a good humor.

Could you guess from my first letter that I was homesick? I tried to hide it; but I was, for the first day or so. Since I've been here, though, I've had to work too hard to get a chance to think about it.

There are lots of opportunities here, and I'm glad I came with them. Of course, I don't expect to be president right away, but there are a barrelful of other places below that I can learn to fill. I'm going to learn, too.

If mother asks how I am, tell her I'm getting along fine, and give her my love.

Affectionately,

JIM.

From the Old Man to Jim.

DEAR JIM: Enthusiasm is all right in its way, but the kind of enthusiasm I have

run up against in my time has been usually the kind that talks about itself. That doesn't pay.

You may fool yourself into believing you are exploding with pride in the line, but there is another kind of enthusiasm—it's the working kind.

The man who has it keeps his mouth shut and goes out and *works*. He can't afford to waste time telling how the service might be improved, if he could only be put in charge of it; but he goes up to his chief clerk, or to whoever is in authority, and finds out, by a little tactful questioning, how that official would receive a suggestion, and then makes it so that his superior officer will believe it's the right thing.

You don't see that kind of a man often. Why? Because we're all more or less children, and have to be coaxed and pushed and wheedled—something like Homer Bastrop's engine on the Monongah division.

Homer was a patient, enduring sort of cuss, or he would never have gotten that engine to work the way it did. She would sashay along, *woof-wo-of-wo-of-w-o-o-f!* and she would back right up and stand plumb still, with the gage up in the hundreds and the boiler getting hotter and hotter. The first time she did it Homer ran her in the shop for overhauling, but they couldn't find anything wrong with her.

Then she began to do it regular, and Homer got mad and madder. Finally, one day he began talking to it—got serious, then became sentimental, and almost cried over her. And derned if she didn't get right back into action again!

So, after that, whenever she got in her tantrums, Homer would roll out a string of loving words, and in about five minutes she would be clipping along again. It worked the deuce with the train schedule, though, and they cut her out after a while and put her to hauling coal.

Homer had simply learned that she had to have a wheedling to get in action. A good many people know that coaxing will get what cussing can't, but they only apply it to certain things. Pat O'Day's boy was like that.

The old man was about as close-fisted as he could be. His hand had held the throttle so long that when he got money in it you had to pry it open to get it away again, and more'n likely he would be changing it to the other hand while you were getting at it. But that boy of his never thought about using a crowbar to get it. No, sir!

He would get the old man talking about engines, and freights, and improvements in the service, and what he had done for the company, and he would sit there with one ear cocked up, listening respectfully, and now and then putting in what the lawyers would call a "leading" question — and when he had his hand oiled enough, it would just open naturally and a five or ten dollar bill would slip out.

And, mind you, Pat O'Day was the man who, when T. F. was caught on the line one day without change and wanted to borrow five dollars, told him he wanted security for it!

Come to office work, though, the boy was different. He would sulk and grumble when anybody tried to show him how to do a thing right. And suspicious! He didn't trust a soul. He was always afraid they were after his job.

He forgot to apply to his every-day life the oil that he applied to his dad. That's the trouble with most of us.

We are always watching to see that he don't tread on our corns. Then, some day along comes a fellow who hides the hurt when you tread on his, smiles when you cuss at him, doesn't give out forcible opinions without first knowing yours, keeps from quarrels, and never complains about his abilities being unrecognized—and before you know it he is your chief clerk, and running things smoothly, too. And you wonder why he was pushed above your head.

No doubt you were a better man than he was. You knew more about the office details, and were more honest with your feelings, and man enough to not let any one abuse you.

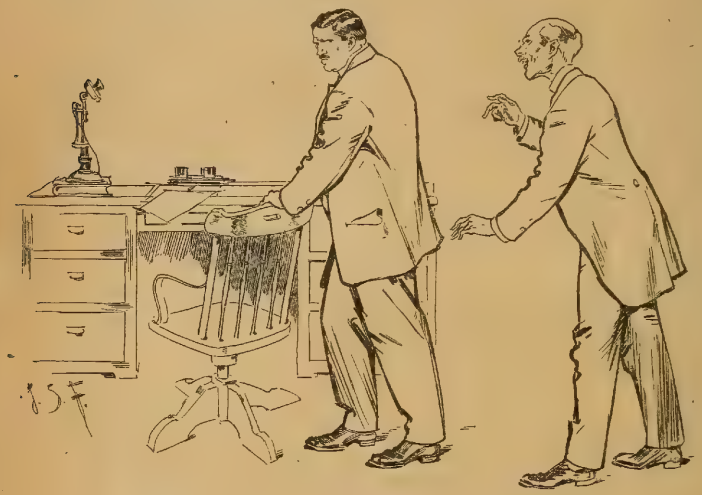
Right there was your trouble. The big-minded man can afford to let such things pass, because he would have to be small to notice them. I know what small annoyances are; but, hang it, if you passed up one, the next would come easier, and finally you wouldn't notice them any more.

Pat's boy had to blow off steam when-

ever anything jarred him, and pretty soon he was blowing it off all the time, when he should have been applying it to what he was paid for—his work. His flues were bad, and he wouldn't let any one help him take 'em out, and so they just naturally ran him to the scrap heap. And you couldn't blame them.

If I buy a big engine, and put it out day with the company. It's made me stick with them, and I'm going to stick now till I get to be general manager."

Funny, wasn't it? And where is he now? He's not only G. M., but I'll bet he's the best G. M. the B. and G. ever had. And he'll be the best president they ever had, too. And he's as enthusiastic now as he ever was.



IF HE ASKS PAT ANYTHING, PAT WILL KEEP ON TALKING EVEN AFTER THE C. C. UNDERSTANDS.

to haul fast freight, I want it to do the work. That's what I bought it for. I didn't buy it to send it to the repair-shop every ten minutes. I want it out on the main line, pulling a string of cars; not standing on a siding.

None of your five-minute enthusiasm for me. When I first went with the B. and G. I made up my mind I would look on every day as the day I was just starting to work for them. And I tell you, you have no idea how interesting it got to be. It was a regular picnic. T. F., your general manager, was section-boss at the time, and one day he and I were talking about what we wanted.

"I'll tell you, Bill," he said, "when I came with this road I made up my mind I would look on every day as a new

That enthusiasm of his got the B. and G. into Chicago when the combine was against them; it got him the peach traffic from the South after the D. R. R. had held it for fifteen years; got him the government mail when he bid three cents higher than anybody else to competitive points; got him a twenty-year contract with the American Paint Company—and Heaven knows what else.

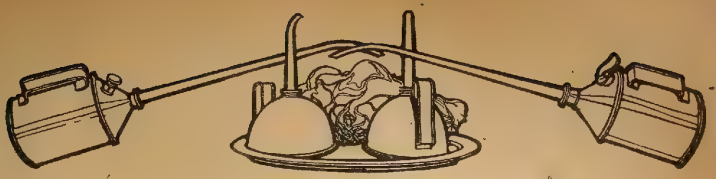
Why does he get it all? Because he uses his steam for a purpose. He doesn't waste it. That's the working kind of enthusiasm.

It doesn't make as loud a pop as Charlie O'Day's did, but it has a heap more action and go to it.

Your affectionate

FATHER.

(To be continued.)



The Stuff that Helps the Wheels Go Round.

BY HORACE H. SMITH.

THERE are three main factors in transportation. They are propulsion, lubrication, and check of momentum. Of these practically equal factors, lubrication has been the least spectacular, and perhaps the most difficult of satisfactory solution. The railroads groped about for many years, blindly experimenting with almost anything that would give a greasy coating to friction-producing parts. The results were worse than nil, and money flowed through overheated bearings in the shape of hot boxes and wrecks, until a man came who recognized the need of the scientific application of a scientific lubricant.

From the Use of Pork Strips to Up-Drop Lubricators and the Highest Grade of Lubricating Oil is a Far Cry, but the Railroads Had to Make It in the Last Fifty Years.

IN no branch of the railroad service has there been such a great advance as in the quality of the oils that are used and the methods of their application. From an easy way of causing trouble and wasting money, lubrication has become an art; a means of expediting traffic, saving labor and material, and increasing net earnings.

Every day American railroads consume over 100,000 gallons of oil. The annual consumption, which approximates 40,000,000 gallons, would fill nearly 6,900 tank-cars and make a train fifty miles in length.

The oil would weigh about 150,000 tons, and there would be enough of it to cover a square mile of territory to a depth of more than two inches. The George Washington, the largest German steamship afloat, with its displacement of 37,000 tons, would displace only about 9,700,000 gallons of oil.

The quantity used every year would float four George Washingtons and more than seven of the famed Dreadnought class of battle-ships.

It costs the railroads close to $1,000,000 a month to keep the wheels turning smoothly. Under the methods, and with the oils that were in use when the gray-haired but still active railroad men of to-day were boys, the cost would be many times as great.

Even as recently as only twenty years ago, when the equipment was much

lighter than now, the lubrication of a passenger-car cost over one dollar per one thousand miles, while freight-cars cost from thirty to fifty cents. To-day, a twelve-journal passenger-coach costs only twelve cents for oil per one thousand miles, and an eight-journal freight-car costs about five cents.

Expense of Hot Boxes.

The direct cost of a hot box is from ten to twelve dollars, to say nothing of the loss of time of the train-crews that are delayed by it. In addition, and most important of all, there is always the danger that a heated journal will precipitate a disastrous and expensive wreck which may involve loss of life.

Accidents resulting from hot boxes, which often were attended by fatalities, were of frequent occurrence a quarter of a century ago, but now they are unheard of. Of course, the advance in equipment and methods is partly responsible for this; but, when all the facts are considered, it will be appreciated that oil is a subject of vital importance, alike to the railroads and to the people who work for them and travel over them.

In the early days of railroading, lubricating appliances were as crude as the engines, and as unsatisfactory as the oils that were used. The oil for driving-journals was fed through holes, which often were filled with wicking to check the flow, running from the top of the box, which was filled with waste. An open-top cup on the steam-chest carried oil for the valves and cylinders.

In 1854, a technical journal, in describing a "special fast passenger-engine," weighing fifteen tons and built to run ninety-seven miles in two hours and a half, called attention to a new feature: "a handsome brass reservoir, secured to the side of the boiler, holding half a gallon of oil, with pipes leading to the different journals, each supplied with cock for letting down oil at the pleasure of the engineer while running."

Even then, though the idea did not bear full fruit until nearly twenty years later, railroad men were thinking of economies. In 1855 the *American Railroad Journal* said:

"Perhaps there is no other article so liable to waste as oil; it is often the case that the method of lubrication is such that it is difficult to see when enough oil is communicated, without using double the quantity needed. Should not this fact suggest some improvement in oil-cups? Cannot some man of genius get up some lubricator which will feed itself automatically?"

That question has, of course, been answered many times since then. In 1869, Nicholas Seibert, a California engineer, introduced the first down-drop feed lubricator, operated by the hydrostatic displacement principle.

The first up-drop lubricator was invented in 1873 by John Gates, of Portland, Oregon. These inventions were gradually developed and improved upon until the establishment of the methods in use to-day, which now seem incapable of improvement, but which will, in their turn, give way to something better.

There is an abundance of data regarding the development of railroad equipment, but the early records contain very little regarding lubrication. It is assumed, however, from the fact that they then were in general use in Europe for machine lubrication, that vegetable oils, and chiefly olive oils, were used on the first American roads.

Pork as a Lubricant.

Subsequently it appears that, in the general search for something which would answer the needs, anything that contained grease was experimented with. Even soft soap was tried; and another genius, whose suggestion seems to have been taken more seriously, advocated the use of strips of fat pork.

Under the heading, "Pork for Journal Boxes," a trade paper inquired with apparent anxiety:

"Why not use it? We have asked fifty railroad men within so many days if they were aware of its success. On the Hudson River Railroad a car was packed with slices of fresh pork, and is to-day as good as it was a year ago. The cost per box for pork packing that will stand a year will not exceed thirty cents."

Still, in spite of this advice, pork does not appear to have been widely adopted

as a lubricant. In the vernacular of the day, the road which would try to use it now would look like the amount then set down as the annual cost per journal-box.

Eating Into Steel.

Sperm and cotton-seed oils were tried and abandoned, and gradually lard and fish oils came into general use for journals and machinery, and tallow for valves and cylinders. They did not give satisfaction, but were used for want of something better.

The destruction of steam-chests and cylinders, from the corrosion caused by the fatty acids in the animal oils, cost the railroads millions of dollars annually. All animal fats have three well-known acids: oleic, stearic, and butyric, in addition to which there is much solid matter commonly known as "stearine," from which tallow candles are made.

This gummy and non-lubricating part of the oil collected on the non-bearing surfaces of the steam-chests and cylinders, and gathered and held the fatty acids which were liberated by the steam at high temperatures. These acids, at the same time that they decomposed the stearine, ate back through the metal until it became so honeycombed and fibrous that it was possible to run the blade of a knife for three inches or more into what had once been solid steel.

With the greases that were used for exterior lubrication it required more power to haul the trains, for the reason that heat had to be generated by the friction of the journal before it would absorb any of the oil. Dirt and dust accumulated on top of the grease, and became mixed with it, and many hot boxes resulted.

Temporary Solution.

This insistent demand was met, a few years later, by the discovery that crude West Virginia oil, as pumped from the wells, was an excellent railroad lubricant. This oil was at first supposed to be of no value, for the reason that it contained none of the volatile qualities from which illuminating oils are made.

Thus, the refiners could not use it; but the producers, unwilling to throw it away, stored it in immense tanks, holding thousands of barrels. They offered it for sale at as low a price as one dollar a barrel, but there was no purchaser.

Finally, J. M. Foss, superintendent of motive power and machinery of the Central Vermont Railroad, tried it as a lubricant, and found it so satisfactory that its use soon became general, and the price advanced rapidly to thirty cents a gallon.

This oil had a low cold test and a flash test of 175 degrees, and was entirely free from gum, grit, or tarry substance. The supply of it, however, was limited. When the last well which produced it had been pumped dry, refiners throughout the country undertook to meet the demand for petroleum oils by extracting all of the volatile qualities from the ordinary crude oils and converting what was left over into lubricating oil.

This residuum was a thick, tarry substance, which, as it stood, was altogether unsuited for railroad lubrication, and the only way by which it could be adapted to such purposes was to mix it with lighter oil to give it the necessary fluidity. It is interesting to note here, in passing, that for ten years the refiners threw this tarry mass into the river on the assumption that it could be put to no useful purpose.

More Makeshift Relief.

While the oils that were produced from this black mass were very low priced, a great deal of trouble was experienced in their use, as they lacked sufficient "body" to properly lubricate the equipment. It was about this time, in 1869, that General Charles Miller, of Franklin, Pennsylvania, began the manufacture of Galena oils under a secret process invented by a man named Hendricks. Like most inventors, Hendricks was unpractical, and, not knowing how to use his discovery, he sold out for six thousand dollars, in addition to which he was to receive a royalty of one dollar on every barrel of oil that was sold.

Not long afterward he sold out his royalty interest for six thousand dollars in cash. Had he retained this right, he

would have received more than two million dollars during the life of the patent.

By the process which he invented, oxide of lead is combined with crude petroleum, whale oil, and other ingredients in perfect solution, with the result that the product has a consistency which preserves the necessary film of oil between the bearing surfaces for long periods and without regard to weather, climate, or speed. In this way the crude petroleum of West Virginia was improved upon.

A Discovery at Last.

Oxide of lead performs a peculiar purpose by filling the interstices of the bearing surfaces, making them perfectly smooth, and putting them in a condition which insures the most perfect lubricating action of the fluid elements of the oils.

General Miller has been the sole directing genius of his company from the day it was organized, forty years ago, and has seen it grow from nothing to the greatest concern of its kind in the world. Recognition was by no means instantaneous. General Miller had all the struggles of a pioneer.

"It was a hard fight at first," he says; "for our oils, while less expensive than the fatty oils, which were still largely used, were much more expensive than the so-called petroleum oils, made from the residuum from volatile oils. For the latter reason, the supply houses refused to handle them, and we were compelled to deal directly with the railroads, which no manufacturer had done up to that time.

"J. R. Nicholls, general purchasing-agent for the Union Pacific, was my first customer. I solicited him for an order, and he told me to send him fifty barrels, with the understanding that if it was good he would pay for it, while if it was not good he would pay nothing. I had plenty of faith but not a great deal of capital, so I compromised by sending him three barrels.

"They were sufficient to prove all of my claims, and we soon received an order for fifty barrels, which was quickly followed by a still larger one. As we began to make inroads on the makers of other oils, we were challenged to make several competitive tests, all of which we won.

"My first big order came from Collis P. Huntington, president of the Southern Pacific. He wrote me, asking for a price on our oils in large quantities.

"Instead of writing him, I took the first train for New York, determined to see him. I was at his office early the next morning, but at the door I was overcome with nervousness.

"The prospect of interviewing the greatest railroad man in the world, as he was then properly regarded, and of being put to a test on my prices, which I had firmly decided would be maintained at the established scale without regard to the purchaser or the quantity, was temporarily too much for me. I retreated—in rather bad order, I fear.

"I walked around the block for an hour or two and smoked several cigars before I mustered up enough courage to return to his office and ask to see Mr. Huntington. I was greatly relieved when I was told he was out of the city.

"I left my card, with a request that I be advised of his return and at what hour he would see me. A week or so later, I returned to New York in response to a telegram, and was at his office at the appointed time, though I must confess that I approached it with something of the former fear and trembling.

Breaking Into Espee.

"Mr. Huntington received me in his brusk way, and asked me the price of my oils. I quoted him the price for the different kinds—car, coach, and valve.

"'You'll have to do better than that,' he said. 'Ours is a big road.'

"I started to tell him of the superior qualities of my oils, but he interrupted me with, 'I know all about your oils. If you'll make the price right, I'll give you an order for five car-loads.'

"For a moment I was stunned by the size of the prospective order, and paralyzed by the fear of losing it. Furthermore, my oils were then being used from the Atlantic as far West as Ogden, and I was anxious to have them running clear across the continent.

"The temptation to cut the price was

strong, but I knew if I ever started that business, there would be no end to it, so I resolved to stick to my guns. After I had run the whole situation over in my mind, I told him, if it would be any accommodation to him, I would let him have five car-loads at the same price.

"Mr. Huntington threw himself back in his chair and laughed loudly. At first I thought he was ridiculing me, but when he sobered down he gave me the order for five car-loads without any further argument. We became close friends after that, and were subsequently interested together in several enterprises, including the construction of a line of railroad which is now a part of the Chesapeake and Ohio system.

Start of a Great System.

"Not long after this incident I had a somewhat similar experience with John F. Lincoln, general superintendent of the St. Paul and Sioux City Railroad. I had been calling on him regularly for several years without selling him a pint of oil, for I would not cut prices.

"After I had been trying for months to get him to sign a three-year contract at a guaranteed maximum cost for lubrication, while he was standing out for lower gallon prices, he suddenly turned on me and said: 'If you will make the contract for five years, I will agree to your terms.'

"I felt much as I did when Mr. Huntington gave me the order for five car-loads, but concealed my surprise and gratification, and told him that, while five years was a long time, I would let him have his way about it.

"That was the first of our five-year contracts on a guaranteed maximum mileage cost basis, which system I adopted for the reason that under it, more conclusively than by any other, I could prove the faith that was in me. In the development of this plan I employed experts, always selecting the most capable men I could find, who were assigned to the roads which entered into contracts of this kind, to instruct the employees in the efficient and economical use of our oils.

"This system worked out very satisfactorily, both to the railroads and ourselves, and it is now in general use. By this plan a railroad manager knows that his cost of lubrication for a year or a term of years will not exceed the maximum cost stated in the guarantee, while it may fall below it.

"No matter how much oil is used, any amount paid in excess of the guarantee is refunded to the road at the end of the year. If, through hearty cooperation with our experts, less oil is needed than was figured on as necessary in fixing the guarantee, the road saves the difference.

"The constant effort of our experts is to decrease the quantity of oil used; to increase the miles run by engines, coaches, and cars to every pint of oil. We now have about one hundred experts at work in this country and in many foreign lands.

"The records show that, as a result of the scientific use of a scientific lubricant, there is not more than one hot box now where there were a thousand twenty-five years ago. When we entered into a contract with the New York Central, the hot box record between New York and Buffalo averaged one hundred and twenty-nine daily, in the passenger service alone.

"To-day, with more than four times as many trains running at the highest speed, including one of the fastest long-distance trains in the world, there are less than one hundred and twenty-nine hot boxes in a year."

Matters of Record.

In the old days oil was stored at practically every stopping place, and it was thrown into the journal boxes with reckless prodigality, whether it was needed or not. All of this waste and labor are avoided by the methods which General Miller has introduced. Oil is shipped in tank-cars or barrels to the general storage points, at terminals, and from there the general superintendent distributes it to the consuming stations, which generally are located at division points.

There the division storekeeper turns it over to the foreman of the oiling station, who keeps an accurate and detailed record of its distribution. Each

engineer draws the scheduled quantity of valve and engine oil required to take him over his run; the experts have it so finely figured out that they know how much he will need, under normal conditions and with a liberal allowance for contingencies.

If an engineer exceeds his allowance, he is required to put in an extra ticket, with an explanation. The records of the oilers, who attend to the passenger and freight cars, are kept in the same way.

At the end of the month, tables are posted at division points, showing the miles run by each engine, and by each engineer, per pint of oil, per ton of coal, and the cost of his repairs. It is the desire of every engineer to stand at the head of this list, and the same ambition fires the car and coach oilers, so there is a minimum of waste.

Oiling Transcontinentals.

Oil is applied scientifically as well as economically. When a transcontinental passenger-train starts East, it is fully oiled at Oakland. At Ogden, after a run of seven hundred and seventy-five miles, and again at Omaha, one thousand miles farther East, it is lightly reoiled, and it is freshly oiled again at Chicago before it returns westward.

Improved methods of packing have also been introduced. Tests and experience have shown that one pound of waste, either woolen or cotton, will absorb from four to six pints of oil. The waste is soaked in oil for thirty-six or forty-eight hours, and is then drained until all of the loose oil has dripped off. Then, with the waste holding just enough oil so it will ooze through the fingers when tightly gripped, it is carefully packed in the boxes, with none of it in front of the journals.

Old waste, instead of being thrown away, is put through a cleaning process which makes it as good as new, and all of the oil it holds is reclaimed, and put through a strainer and filter and restored to service.

The results which these methods have accomplished are illustrated by a recent test on the Norfolk and Western Railway. On May 10, 1907, baggage-car 236, running between Bluefield, West Virginia, and Wilcox, was fitted with new brasses and freshly oiled, with five gallons of oil to ten pounds of waste, and the boxes were sealed.

About once a month the foreman in charge of coaches would open the boxes and stir up the packing, if necessary; but no oil was added. The car was in continuous service; and up to March 13, 1909—twenty-two months from the time the test began—when it was transferred to another division, it had run 88,609 miles, at a cost for oil of one dollar.

Near a World's Record.

The car was running smoothly when it was transferred, and did not seem to need reoiling. It is believed that, if its record had been transferred with it, a new world's record might have been established.

On October 30, 1907, on the same road, coach 562 was freshly oiled, supplied with new brasses, and put in service under similar conditions. On October 10, 1908, this car was taken away from Bluefield, and the test was ended. At that time it had run 69,364 miles, and it was reported that the packing was "in very good condition."

The working out of this system of expert supervision, and the extent to which the railroads have profited by it, were strikingly shown by figures recently brought out in connection with the government's extensive inquiry into the oil industry.

Government Evidence.

On seventy American systems, including all of the important lines, it was shown that for the period from 1897 to 1906, inclusive, there had been a saving of from twenty to eighty per cent in the cost of lubrication per ton mile.

On the Union Pacific the cost had been reduced to less than one-fifth of what it was ten years ago. On six roads the cost was reduced over seventy per cent, on fifteen others from fifty to seventy per cent, and on twenty others from thirty to fifty per cent. During the same period every other department of railroad operation showed an increase in cost.

Observations of a Country Station-Agent.

BY J. E. SMITH.

No. 19.—Is It Any Wonder That Railroad Men Don't Make Good Farmers? Jake Z. Planted Canned Tomatoes and They Came Up Just Plain Hay-Fever.

As a rule
A man's a fool.
When it's hot
He wants it cool.
When it's cool
He wants it hot.
Always wanting what is not,
Not content with what he's got.

THERE are forty-two more verses of this epic poem, but that is probably forty-two more than the editor will stand for. As Emerson would not say in the terse and expressive lingo of New England:

"This will hold us for a while."

Now, will the reader kindly read those eight lines again, and ponder? It is not often he will find anything in these chronicles to give him ponder. Better read them three times.

What brought this illuminating stanza to the fore was this:

A few days ago I went to Chicago to see for myself if the Masonic Temple does turn on its axis every few hours, and to find out for true if it could actually be bought by an outsider for $102, cash in hand, if the outsider would appear on the spot carrying a canvas telescope and gaze long and patiently at the twenty-third story until he was run over by a cab.

On the way to Chicago Conductor James sat with me, and we had converse about many things. James has one of our choice runs—short hours, a long time at home, and a nice salary. Every freightman on the road looks on James's run with covetous eyes, and figures the year when he will land it.

I told James, in my opinion, he had the best thing a railroad had to offer a man below the rank of High Panjandrum.

James dissented.

"Every one thinks," said he, "running a passenger-train is such a snap. But I'll tell you, if I had money enough to buy a good farm, I'd quit 'em tomorrow."

"You are right, James," I said consolingly. "It's a cruel fate that compels a man to go up and down the aisle of this twenty-thousand-dollar coach, punching tickets, handing out information and good cheer, when he might be chasing an insurgent calf over a twenty-acre lot, or milking ten cows, or turning the mules into the wood pasture, or carrying slop to the Poland Chinas."

It's Mere Popoff.

"All the same," persisted James, "it's the most independent life."

A man hears that expression so often among railroaders that, if he isn't vaccinated, he may believe it. It is only idle talk—mere popoff—the present yearning for what is not.

"James," said I, "you wouldn't stay

on a farm ten days. You would come crawling back. You would watch a crossing, or you would carry water to a construction gang, before you would stay away from a railroad." Then I quoted him that forceful rime:

As a rule
A man's a fool.

Better go back and read them again.

Why the farm for railroad men? I never heard of an engineer wanting to quit the road to run an engine in a flour-mill. I never knew of a conductor anxious to break away and own a shoe-store. It is not a common thing for even a railroad clerk to voluntarily sever his connection and become a clerk in a private enterprise. Wherefore — why this hunger for agriculture?

After thinking so hard for an answer that I could not sleep at night, I wrote the International Psychological Research Association, of Oxford, which in due time submitted this explanation:

> Instinct of primordial man. Why does man recoil at the sight of a snake? Why does man have an innate horror of falling from a high place? Because he lived ten thousand years or more in trees and in cliffs, to avoid the ravages of wild beasts. But he was all the while beset with two dangers, namely: snakes and falling. We have not yet outgrown the impress of fear thus made. By and by man learned to vary his raw-game diet with vegetables. Then, for ten thousand years he diligently cultivated carrots, and that, too, left its impress on posterity. Thus skipping the evolutionary generations, and coming with one bound to the period of grasshopper engines, and all steel hoppers, we find railroad men, in common with all men, recoiling at the snake, in horror of a fall, and with a wild impulse toward a truck-patch.

Clever explanation, isn't it? Scientific, too! Shows that we inherit it—just like freckles, red hair, and other malformations.

Just One Crop.

Generally speaking, the dream of a railroad man is of a small farm, and there is but one crop—chickens!

Many a railroad man has forgotten to throw a derail or close a switch because he was figuring if one hen laid seven eggs in one week, how many eggs would three hundred hens lay in one year?

Then, if it only cost one cent per day to keep one hen, and eggs retailed from twenty-five to thirty cents per dozen the year round, and dressed poultry is worth thirty cents per pound, how long would it take him, on forty acres of ground, to have enough money to buy the controlling interest in the railroad so that he could fire the present management?

About that time the train backs up and the caboose goes off on the ties, and there's such a muss that he forgets the answer.

Jake Z——, a friend of mine—twenty years a freight conductor, and just now wearing the epaulets of blue and gold—had the fever of the soil many years.

Jake's fad was tomatoes. Tomatoes enter largely in the diet of a freight-train crew. They come canned, and are a convenient vegetable.

Likes Them Any Style.

It must be remembered that there is an infinite amount of cooking done on the caboose stove, but there are not many gastronomic surprises. The menu is boiled pork and beans. Occasionally a can of tomatoes adds variety to the relish.

Jake doted on tomatoes. He liked them sliced, spiced, or iced. He took them baked, deviled, fried, scalloped, stewed, or stuffed. Whenever Jake thought of a farm or garden-patch, the mental perspective was always one of tomato-vines in endless profusion, and red and yellow tomatoes hanging pendant thereon in countless numbers.

With all the rest of us, Jake thought that, by and by, he would own a small farm. He made up his mind to strike out on original lines. He reasoned it out: The tomato was the finest vegetable known to man. When people actually found out how succulent and appetizing it really is, the demand was bound to be enormous.

Jake would get in early on tomato culture; and when the people began clamoring and fighting for tomatoes, he would

have them for sale — baskets, wagon-loads, car-loads, and train-loads — each and every one of 'em with Jake's private, Dutch coat-of-arms blown on the skin as a trade-mark.

Ready to Plant.

Jake went at it systematically and scientifically. He talked knowingly of potash, phosphoric acid, nitrogen, and other soil properties.

Good luck attended him. In the fulness of his enthusiasm he ran across an old gardener, who, by some strange and unexplained freak of nature, had developed a new variety of tomato—firmer, hardier, and more abundant than anything heretofore known.

"Burbank may have turned a few tricks with the potato and the cactus, but we'll show 'em something on tomato culture that'll cause Uncle Jim Wilson to sit up and rub his eyes," said Jake. "We'll play Andrew Carnegie's research commission for the usual award of $3,500 per to enable us to continue our investigation and experiments for the perfect tomato, which will take the place of bread and meat."

That winter Jake bought on long instalments a twenty-acre tract of land. In the following spring he received twelve tomato-plants from the old gardener—all that could be spared. Jake guarded them as if they were jewels in the crown of the Gaikwar of Baroda.

He decided not to set out the plants on his patch of ground, as he would only be able to see them once a week. He hit upon a happy idea.

Every other day on his run his train stopped one mile east of K——, and the engine went on to the station and did the station switching, usually consuming one hour in the work. Jake always remained behind in the caboose until the work was done, and the train pulled up to the station. It occurred to him that that particular spot on the right of way was the ideal place for the first year's culture of the new tomato—which he had decided should bear this name: "Z——'s Bountiful."

"'DO YOU KNOW ANYTHING ABOUT TOMATOES?' ASKED JAKE.

A Real Rube.

He prepared the soil over by the fence, and set out the plants with great care.

The section foreman agreed to look after them and protect them.

Jake told the boys in the office at the depot about his experimental station, because he was full of it, and it is not

human nature to remain quiet when interest is at the effervescent-point.

Every other day he worked and watched at the little patch. He sought counsel of experienced gardeners, and he loosened the earth and coaxed them along with all the vigilance and industry possible.

Grew Like Pine-Trees.

With all his care, he was dismayed one morning to find them stringy and wilted. For a time it was a question if they would live; but constant attendance and the summer sun brought them out, and they put out new leaves and pushed themselves upward.

Now, the original tomato is a vine that falls sprawling to the ground and requires a support to enable it to round and ripen its fruit.

"Z——'s Bountiful" went straight up like a pine-tree. It had a hardy stalk, a fine bush, and would evidently hold a peck of fruit without a prop. That alone would make it famous. But add to that the additional yield and the finest quality, and the possibilities of "Z——'s Bountiful" were indeed beyond calculation.

As the season advanced, other garden and truck patches along the road showed tomatoes in bloom, but the new variety steadily refused to give a hint.

It began to give Jake some concern. His wife overheard him saying in his sleep one night: "They're settin' on, all right! Hurrah! They're settin' on! I can see 'em! Ten—fifty—one hundred—ten thousand—one million—on one stem!"

"Jake!" exclaimed his wife, poking him in the ribs, "what on earth's the matter?"

"Matter, nothin'," grunted Jake. "I was just dreamin' we had a head-on collision and killed a million people. Don't bother me."

On the next trip out Jake had as a passenger a farmer, in charge of a car-load of emigrant movables. His car was next to the caboose.

"Do you know anything about tomatoes?" asked Jake.

"I've raised 'em every year for twenty years for the Pokeville Cannery. I reckon I know 'em about as well as any man in Pike County," replied the farmer.

"When we stop up here a few miles," said Jake, "I wish you would get off and look at some tomatoes I am raising on the right of way. It's a new variety—just discovered—and it's bound to revolutionize the tomato industry of the country. I expect to get seed enough from the twelve plants to put out twenty acres next

"IT'S HAY-FEVER. THAT'S ALL. JUST HAY-FEVER!"

year. After that I'll offer plants for sale. I'll get my own price for 'em, too."

The farmer manifested a lively interest.

They got off together and looked over the patch.

Plain Hay-Fever.

"Don't seem to be any bloom," said the farmer.

"That's one thing I don't like. They do seem a little slow," replied Jake.

"You never farmed any, did you?" asked the farmer, somewhat abruptly.

"I've read a good deal," said Jake; "I always thought I'd like it."

"Who told you them was tomatoes?"

"Why, they're a new variety."

"Some one's stung you, brother. Do you know what kind of a crop you're raisin'?"

"Why, of course—"

"You do, eh? Well, I'll tell you. It's hay-fever. That's all. Just hay-fever! Why, man, them's nothing but ragweed, the orneriest plant that grows; and it ain't any new variety, either. You can get seed enough out of them plants for twenty acres, all right; but if you expect to get a lot of money out of them, you'd better change your mind and rob a bank. Rais'n' ragweed! Well, durn my buttons, if that don't beat anything I've ever heard of."

HE SET UP A HOWL THAT WOULD HAVE DONE CREDIT TO AN INDIAN MASSACRE.

Jake did not tell his wife the particulars. When she questioned him about "Z——'s Bountiful," he told her a tale of robbery by envious and eager farmers to beat him to an agricultural triumph.

The boys in the office continue to question him almost eagerly about the new variety. He remains mum. There is a crisis in all development, and in that crucial period science shuts up like a clam. Jake feigns the caution of a weighty secret, and lets it go at that. He doesn't repeat what the farmer told him, but the experimental patch is bare of its crop. No one seems to know, and all the office force is curious.

Can't Beat Sherlock.

Sherlock Holmes would note this pressing curiosity of the office force, and, after poising a tomato in one hand and snuffing a twig of ragweed, would deduct something like this:

"Substitution of plants was made after planting. You will remember plants thrived at first, then wilted, then revived. The *Lycopersicum esculentum*, or tomato, was removed at that time, and the *Senecio jacoboca* or ragwort, or so-called ragweed, was substituted. This was done by the office force. Hence their curiosity and suppressed snickers. By looking over the back fence of the garden of the chief clerk there will be found twelve tomato-vines, but they are

bearing only ordinary tomatoes. How do I know that? Because no railroad man ever has great expectations that come true."

You can't lose *Sherlock*.

Jake doesn't know to this day why "Z——'s Bountiful" failed to "bount." But he is now so busy with the Interior Department, getting information about irrigated land of the great West, that there is no use to stop him and tell him.

Twenty years ago trains were not provided with air as they are to-day. When a train running along broke in two, there was no way to know of it unless the engineer or fireman chanced to look back and notice that the tail end was not in sight. It was then up to the engineer to keep going lest the rear should bump into him with disastrous results. It was considered rank carelessness for the engineer to permit a smash-up of this kind, and he was vigorously disciplined for it.

THE IMPULSE TO SAVE A LIFE PREVAILED.

One very dark night Bill Hart was pulling a freight-train on the branch to Madison. He was creeping noiselessly upon a small hamlet, and came to a stop. Bill knew there was no other train on the division. Both he and the fireman took a sack and got off and disappeared in the darkness. The head brakeman had twisted a few brakes and had just crawled down onto the tender, when there came a rumble of wheels and a smash.

The brakeman went over the breastworks on his head and shoulders. He came out of it with a few bruises and dislocations. The train had parted and run together. Five cars were badly smashed.

Why had Bill stopped? Echo asks why? Bill and the fireman saw they were in for it at a glance. They held a hasty consultation with the brakeman, who was on his feet by this time, with the result that he made a wide détour through a field and came out on the track again a short distance behind the caboose. Here he rolled over in the ditch, and set up a howl that would have done credit to an Indian massacre. They found him there, and helped him into the caboose.

It all came out in the investigation. The brakeman fell off the engine. The engineer knew the train was parted. Would he stop and go back to the assistance, and perhaps save the life of the brakeman, or would he go on to keep out of the way of the rear end?

The human impulse to save a life prevailed. He stopped. They at once came together. Disaster! Tableau: Bill posing as hero.

Bill got out of it that way, and in one week was back on his run.

He was asked, if by making possible a wreck, had it not occurred to him that he was endangering the lives of the men on the caboose to render doubtful service to the brakeman who had fallen off?

"All I thought of," Bill answered, "was that poor fellow that fell off."

So it passed as one of those rare and strange incidents—one of those freakish combinations—that now and then occur in railroading to wreck trains or take human life.

Of course, the whole thing was acted out and recited to save Bill's job. Since that much is known, the question suggests itself, "Why did Bill stop?"

That brings me back to the railroad man and the farm once more.

Bill wanted to be a farmer, and he had a fad. No tomatoes for him! His was Jersey pigs! Bill read all the literature extant on Jersey pigs. He had two cows and a pasture-lot, and he figured that a vast brood of Jersey pigs could roam therein, wax fat and multiply, and add many doubloons to his annual income.

One day he noticed quite a litter of Jersey piglets in a pen adjoining the right of way fence. They were frisky, rugged little fellows. A few nights later he came crawling up to the spot with a convenient bag and proceeded to gather in about six of them, when—smash!

But Bill never wavered from his purpose. It is true that he lied about the accident, and it is true he was about to steal when it occurred. He came along softly a month later, but he was sure of the tail-lights before he stopped. Then he went over and got two pigs. He did not take six, because they had grown so that two were all he could handle.

He combined them with other pigs he had secured by various processes. By and by, when pork reached the fancy figure of ten dollars per cwt., and Bill was prospecting on the profits, the cholera laid its heavy hand on the collection and took them all.

These stories of disaster are related to solemnly forewarn all railroad men against agricultural fads, to admonish them to play the game safely and for small profits on corn, cabbage, or cucumbers, and leave the "wonders" to be worked out by real farmers.

Why should a railroad man be a farmer, anyway? Can a farmer come up out of the alfalfa and run a train, lay a track, or conduct a railroad office? By the same token, can we wipe the ink off our pen, and go out and run a farm?

We can't do it, brothers; we can't do it!

Farming is a scientific game. One must be born to it, and learn it by the hard rule of experience.

If you have too much money, ask the management to reduce your salary. It will be done cheerfully.

Hold a minute! Maybe it would be better to buy a touring-car.

When a railroad man runs a touring-car a year or two, he has no further thought of buying a farm.

"There's a reason."

HE DID NOT TAKE SIX, BECAUSE THEY HAD GROWN SO.

THE DAM-BUILDERS.

BY BANNISTER MERWIN,

Author of "The Girl and the Bill," "The Sword of Tarroloys," "The Corner."

The Course of True Love Crosses the Usual Rough Ground In Preliminary Survey.

SYNOPSIS OF PREVIOUS CHAPTERS.

LARRY SMITH and Jack Marly, being in possession of some valuable water-rights, are building a dam. Smith being the engineer and Marly supplying half the capital. The other half of the capital is supplied by a Denver capitalist named Briggs and another man named Garth. Briggs comes to view the work, and while there he drops half of a broken shilling, which Marly picks up. The capitalist is interested as a money-lender, and not as a partner, and he holds a mortgage on the dam and all the rights, subject to a time-limit for the completion of the work.

Jack finds that Garth, Briggs, and Murdock, the contractor, are playing a double-cross on Larry and himself. A walking-delegate tries to organize the men, and Jack orders him off the place. It is evident that he is paid by Briggs. There is a scrimmage, in which the walking-delegate loses considerable dignity and some skin.

CHAPTER VII.

Rumors.

CARE sat heavily on Jack and Larry that evening. They smoked in silence, on the bench at the front of the shack, until Mrs. Larry—who could tell without eyes that something was wrong—rallied them on their glumness.

At that moment Jack happened to be thinking how much worse off he was than Larry, because Larry had won a splendid wife. And Larry had a profession which would always assure his freedom from poverty, even if Mrs. Larry should manage to lose *her* fortune—which, as Jack had gathered from talk at the table, was safely invested in bonds.

As for himself, he was a vagabond who had been unlucky enough to have money, and now, it seemed, was about to be unlucky enough to lose it.

"Are you two men owls?" Mrs. Larry was inquiring.

"I don't wonder you think so, Mary," replied Larry, with an attempt at a laugh. "Come and join us."

She seated herself beside Larry; and Jack did not turn his head, for it would emphasize his own feeling of loneliness, if he saw that her hand was in Larry's.

"It will do you good," she said, with fine seriousness, "to tell me all about it."

Jack moved uneasily.

"I can guess this much," she went on. "It's Mr. Garth. You have discovered that he is not genuine."

"You know that?" Larry turned to her in surprise.

"Yes. I had a good view of him the other day, when you were taking him and Mr. Briggs over the work."

"But what makes you think he isn't genuine, Mary?"

"I can't tell you what made me think so. I just knew it."

"And Mr. Briggs?"

"He is all selfish."

Larry sighed. "It looks," he said, "as though you had seen in a flash what Jack and I believed only when evidence convinced us."

"In addition," remarked Mrs. Larry,

"there is something that Wing Fah tried to tell me. Perhaps you would understand him."

"What did you make of it, dear?" Larry was quite aroused.

"You remember he went to the city the day Mr. Garth brought Mr. Briggs up? Well, on his way back he seems to have met them, and something was said or done—"

"Come, Jack. We'll see what Wing Fah has to say."

Larry rose abruptly, but he paused to lay his hand gently on his wife's shoulder. "I don't want you to be worried, Mary, dear," he whispered. "Those men sha'n't beat us."

She smiled her loving confidence.

"Wing Fah," began Larry, "you *sabe* Mr. Garth?"

"Me *sabe*," replied Wing Fah.

"The missis says you saw him the other day?"

"Fat-belly man in bluggy," said Wing Fah. "Thlin-belly man, too. Hoss tak a dlink at blook—ass'agement of thlust."

"What did they say?"

"Thlin-belly—top-side bluggy—say: 'Fleeze 'em out! Fleeze 'em out! Make steike!'"

Larry looked at Jack; then said again to Wing Fah:

"Did you *sabe* what he meant?"

"No *sabe*. Fat-belly say: 'Glet away, damn Chinaman'—so!" He illustrated what Garth had done to him by kicking out with his right foot. "Me agglavated by pang." He rubbed his leg ruefully. "*Sabe*, me lun away."

Larry nodded, and he and Jack left the kitchen.

"Could you understand it?" asked Mrs. Larry.

"He overheard Briggs say something about 'freezing us out,' explained Larry. "That's the danger, dear."

"Don't think about it now," she said, "either of you. Take me for a walk instead. I have not been away from the shack to-day."

So they strolled along the mountainside, the three of them, and drew peace from quiet converse and the companionship of the night sky and the dim masses of the friendly peaks.

The next morning the work went on as usual. Down on the pipe-line, as Jones and Armsby reported, the men were actually driving ahead. At the dam the last sluice was being constructed, and the installation of machinery in the power-house was proceeding satisfactorily.

In the sparkling sunlight Jack felt his depression evaporate. As for Larry, he was coolly and methodically busy, using every means of hurrying Murdock without seeming to hurry him.

Later in the day Jack yielded to his desire to ride to "Sweden." Thekla Wist persistently came before the eyes of his memory. Even when the problems of the work were most absorbing, her presence seemed to be hovering near.

He could not understand why this should be so. She was a mysterious vision of beauty, flowering unexpectedly in that meadow in the mountains, but he had seen her only the one time, and he knew no more of her than what she appeared to be. Some unaccountable shyness had kept him from making inquiries about her.

When he came to the bridge that crossed the little stream he saw that his "message" had disappeared—the flowers and note and handkerchief. He dismounted and walked up the stream to the place where he had left them, to make sure that they had not blown away.

The stones with which he had weighted them down were swept together in a little heap. Going back to his pony, he searched the landscape for a sight of her, but he searched in vain.

This day, however, he had no mind to go away without seeing her, and, mustering his courage—it impressed him as odd that the act should require courage—he rode on toward her father's house.

In a distant field he had a glimpse of men mowing; but when he came to the house, no one was in sight. He waited in the road, hoping that she might see him and come out.

In the yard a hammock swung between two trees, and a book lay on a chair beside it. Her book, no doubt; and in the hammock she might have lain, reading.

But though it seemed to him as if she must have left the place only an instant before, the house-door did not open, and no face appeared at the windows.

At last he dismounted, and, walking to the door, knocked. He must at least ask for her. The noise of his summons echoed emptily from the hall within, and no steps came to open to him. The place suddenly oppressed him with that loneliness which one feels so much the more overwhelmingly when there are signs of recent human presence, but no person to account for them.

Again he knocked. There seemed to be no one within sound. Reluctantly he returned to his pony, and, again in the saddle, looked back once more to the unresponsive house, half expecting a late recognition.

She might be sleeping—or ill. The restless pony put an end to his lingering by starting forward with no urging of the spur, and though he found himself headed toward the heart of the valley, he did not check the animal, nor turn him about. Onward the pony carried him, farther and farther from the Bendwater.

Ahead was another farmhouse. As he approached it some one came out and started down the road toward him. He knew her at once by the golden gleam of her hair, by the untrammeled manner of her walk. It was Thekla. As he got nearer to her he saw that she was carrying a black hand-bag.

He waved his hat happily, and, getting down from the pony, led the animal, meeting her on foot. She smiled with frank pleasure, and took his extended hand.

"Little Christine Peterman found your note," she began. "She brought it to me, with the flowers and the handkerchief. Thank you for your thoughtfulness."

"I am glad you felt no after-effects from your fall."

"It was nothing. Even the bump is gone. See!" She turned her head and parted the heavy coils of hair for his inspection.

"I planned to ride up yesterday," he went on, "but I couldn't get away."

She smiled faintly. "You would not have found me. Little Christine's mother has been very ill, and I have had to be with her nearly all the time."

"Then you are a nurse as well as a valkyr?"

"I? Behold!" Laughingly she held the hand-bag before his eyes.

"You mystify me," said Jack.

"I have no wish to mystify you, Mr. Marly. I am the doctor."

"The doctor?"

She nodded.

"But I don't understand. There are so many things I don't understand about you."

"I am a regular M.D.," she said quietly. "My father led these people to this valley some years ago, from Minnesota. I stayed behind, with some relatives—my uncle, who is a banker at Minneapolis—for I was studying at the University of Minnesota.

"After graduation I went to Chicago and took a course in medicine and surgery. I spent a year in a Chicago hospital. Then my father sent for me."

"And you buried yourself here?"

"It is my father's home." She spoke gravely. "He is growing old. He has had many disappointments in his life. I should not like to be his last, great disappointment."

Jack was silent.

"He spent several years in the West long ago," she went on, after a pause. "Then he came back to Minnesota and married my mother, and went to farming. I think he is less moody now, less bitter than he used to be."

"I used to be afraid of doctors," remarked Jack. "There was one who looked after the football squad. He caught me smoking a cigarette once"—he smiled at the memory—"but there can't be so many cases here that you are kept busy, professionally?"

"Only now and then."

"Why not have a gallop with me, then? You ride, of course?"

"Yes, I ride; but I have no good saddle-pony. They are more interested in work-horses up here."

"If I were to bring an extra pony—"

"That would be splendid," she sighed.

"I will come for you to-morrow." He took hold of the broken shilling in his pocket, hoping that its lucky magic would help him to get her consent.

"Hardly to-morrow."

"Why not?" he asked boldly.

"Mrs. Peterman is not out of danger yet."

"Then, the next day?"

"Very well, the next day—and, thank you."

They had now come to her house. "If you will wait I will get your handkerchief," she said.

"Of course I will wait—as long as you will let me, but you needn't bother to return the handkerchief."

"Oh, but I must." She tripped lightly to the house, and returned in a moment with the square of colored fabric. He had hoped that she would keep it. He would like to have her possess something of his.

"I knocked at the door as I came along," he explained, "but I could get no answer."

"No one is at home, except my aunt. She is very deaf."

"Your father is out in the fields?"

"Yes; and that reminds me, Mr. Marly. I am glad to have seen you to-day. There is a story in circulation that your company secretly intends to flood this valley. I think you ought to know."

"To flood this valley? Absurd!"

"Yes, I know it is absurd, and I have told them so. Nevertheless, the story is believed. My father believes it."

"But who could have said—"

"It came through some Norwegians, at Larkin City. They profess to have heard it from some of your workmen. The dam is being built so high, they say, that the water will back up and cover all this land."

"Why—"

"Your company is supposed to have planned it in such a way that the flooding will drive us all out and leave us no recourse but lawsuits. You are supposed to have so much money that we shall stand no chance in the courts."

Jack was thoughtful. "I think," he said, "that if you don't mind I will wait and have a talk with your father."

"I doubt if it would do much good just now. My people are stubborn, Mr. Marly. When they once get an idea into their head, it is not easy to get it out, and you cannot possibly convince them by direct argument."

"Nevertheless—"

"If you will only say nothing about it, and leave it to me, I believe I can make my father see, after a few days."

"But if I were to offer to show him our plans?"

"He would be more suspicious than ever. He would say that it is very easy to deceive with lines and figures."

"You prefer that I shouldn't, then?"

"It would do more harm than good. I wished you to know of it, but I do not wish it to worry you."

She was very earnest and very lovely, and underneath her charm was a note of sound common sense. He was almost tempted to tell her of the difficulty in which Larry and he had found themselves, but he remembered in time that that was as much Larry's secret as his own; and Larry, for all he knew, was not even aware that such a girl as Thekla Wist was in existence. But he said:

"Have you ever been to the dam?"

She nodded. "I have been in sight of it more than once, with my father, but I have never gone quite all the way, and it is some months since I have been out of this valley."

How lonely she must have been!

"You know, that used to be our route to Larkin City."

"You speak like the oldest inhabitant," he laughed.

"And, in fact, I have been here less than a year."

"Well, some day, before long, I am going to take you down to the work and show it to you properly."

She looked doubtful.

"You will like Mrs. Smith," he hastened to add. "Her husband is the chief engineer. He and I are in the thing together."

"Then you are one of the engineers?"

"Nothing quite so busy as that. But will you come?"

"Perhaps. Isn't it enough that I promise to ride the day after to-morrow?"

"Just what you wish to do is enough," he said. "I shall be on hand, with a pony for you. Meantime"—he frowned a little—"I am a bit troubled by that rumor you speak of. Are you certain that Larry Smith and I hadn't better do something about it?"

"Quite certain. You would probably make things worse. I am sure that I can manage it."

"But—"

"You don't realize how deeply rooted their suspicion of the company is. It has been growing for two years; so please do not even tell Mr. Smith, your chief engineer."

Jack yielded. There was nothing else for him to do. But his doubts recurred when, on the road back to Bendwater Cañon, he was halted by a burly, middle-aged Norwegian, who said to him in broken English:

"You must not come here again."

"Why not?" asked Jack coolly.

"We know why you come. You must stay away."

"I come to see Miss Thekla Wist."

"No—no! We understand why you come."

"And I shall visit Miss Wist again," Jack continued.

The man shook his head, and began to jabber in his native tongue, and Jack rode on. All the way to camp he wondered about this strange suspicion among the Norwegians. Could it be traced back to the brain of Thomas Briggs? It would be easy for him to pay one of the workmen at the dam to carry the false story to the Norwegians of Larkin City.

When he went to the home of Thekla Wist, on the second afternoon following, leading an extra pony, he was prepared to find his progress disputed, but he met no one. The girl was waiting for him.

CHAPTER VIII.

The Beginning of Dreams.

"LET'S make a circuit of the valley, among the foot-hills," he suggested, and at her assent they went back to the limit of cultivated ground and struck off to the left.

The soil was firm, and the slopes were easy. Thekla rode to perfection. With corselet, helm, and spear, she might well have passed for the valkyr his fancy had first painted her. Her face was alight with the joy of the bounding gallop; her red lips parted above her white teeth, and her blue eyes shone.

At their left the hills billowed up to the peaks. Below, at the right, was the well-watered valley, with its fields shimmering in the breeze. After a time they slowed their ponies to a walk.

"How are your patients?" asked Jack.

"Doing well—thanks!"

"And the other matter?"

She was ready for the question. Indeed, she may have guessed how close to the tip of his tongue it had been lying.

"I am progressing slowly. It takes time to convince my father. Once—many years ago—he trusted a man too much; and since then he has seemed to trust no one."

Jack hesitated. "A fellow stopped me on my way home the other day, and warned me to keep out of the valley."

She reined in abruptly. "What did he look like?"

"He was, say, forty—strong looking, with peculiarly long arms. He had a straggling red beard and bushy red eyebrows."

"That was Ole Knudsen." She shuddered as she spoke the name. "How did you answer him?"

He told her, and she looked thoughtful. Jack became aware that conflicting issues centered in the man, though for the time she said no more.

After they had nearly completed the circle of the valley, however, she turned her pony abruptly down toward a field, where a man was cultivating potatoes.

"Come!" she said to Jack, and he followed.

The man stopped his machine as they came near, riding carefully between the rows. It was Knudsen. He glared at Jack, but his eyes softened when he turned to Thekla.

She addressed him sharply in Norse. He answered little; but Jack could see the look on his face range from admiration to distrust, and from distrust to a sullen submission. At her signal, Jack swung his pony around, and they rode out of the field.

"I don't think he will bother you again," she said, "but he is a hard man to deal with." Then, in a tone of embarrassed frankness, she added: "He is a widower with six children."

Jack understood. That creature of the soil had desired this goddess!

It was as she had said; he saw no more of Knudsen, though almost daily he came to the valley. But Thekla he saw again and again, and soon it was

"Thekla" and "Jack" when they spoke to each other; and they were telling each other freely of their past lives, and voicing their future hopes and aims.

He even one day confessed to her his follies—how he had squandered a fifth of his fortune — and he knew that the lack of reproof in her sympathy was due to her knowledge that such follies were, with him, all of the past. Her fine comradeship would of itself have been his salvation.

He could not induce her, however, to visit the dam. Whether it was shyness that made her refuse, or whether she did not wish to go alone with him so far out of sight of her own home, her pretty obstinacy was persistent.

One day, when she spoke to him of her life in Chicago—of people she had known there, of the books and the music that she had enjoyed — he caught the note of wistful yearning in her voice. "Thekla," he said abruptly, "you have been lonely here."

She bent her head a little.

"You have sacrificed yourself to be with your father—to deal out pills to these farmers. You have cut yourself off from the worthy things you had learned to enjoy, and you are facing a monotonous future. You know it."

Still she was silent. They had finished their ride, and were standing in the road before her house. She turned away from him and stroked the warm neck of her pony.

"It isn't fair to you," he went on hotly. "Your father ought to see it. There is so much in life for you that—"

"Don't!" She turned suddenly, and he saw that she was crying. "I am the tragedy of the second generation," she said. "They have taught us to know more than our fathers—to see more—to enjoy more—and yet we are held back by the old bonds of family relationship.

"I have known it for years—that I was having my glimpse of the promised land, only to be drawn back into the arid desert of a life like this! But it has to be. My father is my father; there is work for me here; there is no escape."

He tried to take her hand, but she motioned him away.

"Why didn't they bring me up as they are bringing up Christine Peterman?" she exclaimed fiercely. "Then I should have been at least contented. But now I am forced to look at the ignorance of the very father I love—and know it to be ignorance.

"Do you think it has been no shame to me that he should believe that stupid story about the dam? Can't you understand why I have kept you from meeting him? It was because I was ashamed of him. Ashamed of my father!" She burst into a torrent of tears.

"Thekla, dear—"

"You *sha'n't* pity me! You *sha'n't!*"

"But, Thekla, there is no shame in a life that has lacked opportunity."

"I know it. I have tried every day to keep that thought in my mind; but I had no happiness here until you came, Jack. You were something from the life I had left behind."

"But I hope to be something of the life you are going to live," he said soberly. "Do you think I would look down on your father, Thekla?

"There is shame to me in my history of wasted opportunities; but he — at least, he has made things grow; and he has shown himself a leader. Men obey him. I shall honor your father, Thekla."

"This is foolish of me!" she exclaimed of a sudden. "Good-by!" She darted away to the house, and for several days thereafter he came to the valley in vain.

CHAPTER IX.

The Power of the King.

MEANTIME, the work on the Bendwater went steadily forward; and that, in spite of innumerable unexpected delays, that reduced, little by little, the safety margin of time. Larry and Jack could not prove that these petty delays were wilful.

Thus, when a load of staves was upset on the road up Klingerman Pass, and the needed staves were so scattered down the slope that it took an hour to gather them, it was easy for the teamster to point to a soft place in the trail. Again, when a boulder rolled down the mountain and smashed a short section of com-

pleted pipe, though Jack climbed within the hour to the place whence the boulder had started, he was unable to find any human footprints.

All that Jack and Larry could do was to be watchful. Every morning Jack nonchalantly patrolled the line of the pipe, appearing unexpectedly where the different gangs were at work.

In the evenings he canvassed the situation with Larry. They had become quite dogged about it, and they tacitly adopted the policy of ignoring the final issue, as far as they could, and concentrating on each immediate problem as it arose.

To get the pipe completed was the first concern. Gradually this was accomplished. By Saturday, the twenty-third, it was ready to carry water—as the contract specified.

From the intake below the dam, all the six miles to its outlet basin on the inner slope of Klingerman Pass, it extended its serpentine length, segmented by nearly a million steel rods. The last sluice, too, was done, and the manufacturer's men in the power-house had completed the installation of the machinery.

During all the crowded days there had been a thousand signs of coming trouble. Murdock's men appeared to be getting out of hand. Groups of them who went down to Larkin City on different evenings returned to camp boisterous and unruly, waking the night with yells and revolver-shots.

Whisky found its way to the sleeping-tents; and there was more gambling than formerly. To everything that Larry said to Murdock, the contractor had one reply.

He could not prevent the men from going down to the city after working hours; and the trouble was primarily due to Jack's handling of O'Neill, the walking-delegate. Yet Larry knew that Murdock, despite his pretense of helplessness, could control the men if he chose to.

One evening, a few days before the pipe was completed, Jack went alone down to the temporary camp at Klingerman Pass. He found Jones and Armsby at their tent, much depressed.

"Listen to that, will you?" said Jones disgustedly, after greetings had been exchanged.

"That" was the sound of squabbling argument from the long tent of the workmen.

"It gets worse every night," continued Jones. "The foremen don't half manage 'em. The trouble is, the men have got the idea that Bill Murdock is afraid of them. Darn it! I'm beginning to believe he is."

Jack knew better, but he said nothing. After a time, however, he strolled quietly over to the men's tent and entered.

The scene was not pleasant; the odor was worse; and the jabber continued, growing louder with the ostentatious effort to ignore the presence of the visitor. One black-browed chap, in particular, remarked in a loud voice to three others who were shaking dice with him:

"Some people never knows their places. They gouges the poor man, an' then comes an' stares at 'em, eh? Here, I'll throw to them sixes!" He rattled the dice-box again.

Jack saw that he would get into trouble if he remained. With a last glance at the frowzy groups, he walked away. In the darkness outside he heard a man say to another:

"O'Neill told me last night that if we—" The rest was lost.

All about the camp it was unrest—unrest. O'Neill was making good his promises. Still, if the men—even with their growing disorderliness—could be kept to their tasks only a few days longer, all might end well.

Let ever so little water be in the reservoir on the thirtieth; let it be turned into the turbines and set the big dynamos in motion; let the waste run through the pipe, down to the thirsty soil of Mormon Valley—let these things be done, and Thomas Briggs, by his written and completely witnessed agreement, would have to renew the mortgage. Bonds would be sold then, and in time the mortgage would be paid; and Larry and Jack would hold their own with Aaron Garth.

In the midst of this crisis it was Mrs. Larry who developed the strongest hope. Her calmness was better medicine for Larry and Jack than any forced or hysterical good spirits.

She did not deny the menace of defeat; but her quiet insistence on the right

made them feel that defeat would not matter so much, if only they did their best. And, as much as they could, they still ignored the chances of defeat.

It was Friday afternoon, the day before the pipe was finished, when Jack, after two days in which he had been closely tied to the camp, felt justified in riding up to "Sweden." He had seen Thekla but once since her outbreak, and then only for a few minutes; and now his heart leaped at the prospect of an hour with her, for he was taking the extra pony along, and hoped that she would ride.

When he reached the house and knocked at the door, however, though she answered at once, and though she did not conceal her pleasure in seeing him, she made no move to go and put on her riding-habit, but invited him instead to a seat on the doorstep. She clasped her hands over her knees and looked straight before her, and said:

"Jack, you mustn't come any more."

He laughed. Did she think that he could help coming? Her feeling, he inferred, was due to a decision that his friendship was disquieting; that it made her lot the harder, by the contrast between the hours she passed in his company and the dreary monotony of her life among her people.

Well, he would lift her out of that notion. He would show her that she owed something to herself, and perhaps —he realized this fully for the first time —that he himself— She was speaking again.

"I am serious," she said. "Your visits have been misunderstood."

He interrupted hotly. "I don't see how—"

"Wait! The suspicion has grown that your rides about the valley have been for the purpose of spying out the land. Ole Knudsen has made them believe it. The worst is that they think I am in league with you.

"They believe that you have drawn me to your view of the case, or at least that you have fooled me. They sneer at me now when I tell them that you are not going to flood the valley. Even my father has forbidden me to speak of the subject to him."

"I can't imagine such a thing."

"It is true. You don't understand my people, Jack. Suspicion is their great weakness. Since they have seen you and me together, all that I can say counts for nothing. So you must keep away. I ask it for their sake as well as for yours."

"Why for their sake?"

"Because I do not wish them to be driven to madness."

He laughed. "Not as bad as that!"

"Think for a minute what it means to them. They came here and found this valley barren. They bought it for little. They dug ditches and diverted the streams, and they have made the desert bloom.

"It has become home to them. They love it. The fear that your company may force them from their homes is enough to drive them to anything."

"But they can be made to see—"

"Only by patience. Their minds have been thoroughly poisoned by false rumors. There is another reason why they love this valley. Here they are almost shut off from the world. They are, in a way, independent. They govern themselves, and they are let alone to work out their own customs.

"If they are driven from this valley, they will have to go where they would probably come directly under the rule of men whom they would not understand, and who would not understand them. This valley is a little monarchy, and my father is its king. If he were to order that a wrongdoer be tied to a post and flogged, it would be done."

"Has it been done?" Jack was amazed.

"No, but I have lived here long enough to know that such an order would be obeyed. The people here never call upon the law of the State, though they pay their tribute of taxes. They are, indeed, a law unto themselves. And they are well behaved, too." She said this with some pride.

"Look at me," said Jack; and when she showed him the troubled depths of her eyes, he continued: "I am going to have a talk with your father."

"No!"

"Yes! Whatever I can say, I must say. Now, I am going to tell you something that I haven't told you before, be-

cause it was not my secret alone. Unless the work down there in the cañon is finished by the thirtieth, Larry Smith and I shall lose our shares in it.

"Another man—an interested man—is trying to make delays so that we sha'n't get through on time. Do you understand? I am convinced that this story about the flooding of the valley was started by that man. It is intended to make trouble for us."

She stared at him, nonplused.

"More is at stake," he added, "than you have realized. There is no time for patience. The man who is behind this rumor will force the issue—must force it, if he is to rob us—within a week. You say you cannot change the situation at once. Then it can do no harm for me to talk with your father. Where is he now?"

"In the field, at the back of the barns," she faltered.

He arose. For a moment he smiled down at her. It seemed as though he were about to speak again; but at last he reached down and took her hand, pressed it gently, released it, and walked quickly around the corner of the house. She sat for a time as he had left her; then, with a sigh, she followed him.

Peter Wist looked up from his radish-bed as Jack approached. He was a rugged man of sixty—firm of mouth, sharp of eye. Time had plowed many furrows on his face, and the autumn of life had touched his thick hair with white frost.

"How do you do?" said Jack soberly. "My name is Marly. I am one of the owners of the power-dam in Bend-water Cañon."

Peter Wist got slowly to his feet.

"I understand," Jack went on, "that you men up here think we are going to flood your valley. It is not true."

"You say it is not true," said Wist dryly. His English was good, though made quaint by the trace of foreign accent.

"I will prove that it is not true. Come yourself down to the dam—bring with you as many of your friends as you choose—and Mr. Smith and I will show you all our drawings and specifications. You will then know just how high the dam is to be built, and you will find that the water cannot possibly back up as far as this valley."

Wist made no answer.

"Isn't that a fair offer, Mr. Wist?"

"Yes; I suppose so," said Wist indifferently.

"We will also show you our title from the State, and you will see that we have not filed for a head of water high enough to make the flooding of this valley possible."

"It is easy to fool men with plans and writings," remarked Wist. "We would not understand them."

"Then bring with you some lawyer that you trust," began Jack eagerly.

"We trust no lawyers."

"But you have friends in Larkin City who would understand the maps and explain them to you."

Wist shook his head.

"We will do more than show you the plans, Mr. Wist. We will give you a written agreement not to let our reservoir come within a mile of the head of the cañon."

Jack was turning the broken shilling in his pocket, for he had come to have a half-superstitious faith in its value as a charm. It seemed to have no virtue in this case, for Wist merely shrugged his shoulders.

"What do you say?" Jack smiled.

"I say nothing. I do not believe you."

"But I will prove—"

"I do not want your proof. You have been coming to spy on us many days." His eyes were beginning to light up with the anger which he had until now kept under control.

"But you are mistaken," said Jack eagerly. "I have not come to spy. I have come to see Thekla."

Wist laughed scornfully. "I understand," he said, and his voice shook. "You would play with my daughter while you spy. You would rob me of my home and of my daughter, too."

"It is false!" exclaimed Jack. And at the same moment he heard an exclamation behind him, and turned to see Thekla, aghast. "Yes," he continued, "it is false!"

Wist had drawn himself up.

"You say I lie?" he demanded fiercely.

"I say you are mistaken," replied Jack. "You do not understand. We will not flood your fields. We have never thought of such a thing."

"You say so," remarked Wist grimly. "And my daughter?"

"And Thekla—" Jack's voice broke. He looked at the girl and made an impulsive gesture toward her; but she drew back. "I have come to see Thekla," he went on, "because—because—" Again he turned to the girl. She was like stone.

Wist was studying him with burning eyes. "So," he shouted, "it is what I have said!"

"It is not what you have said," cried Jack. "It is what I say now. I have come to see Thekla because I love her—I wish her to be my wife."

There was a long silence. Peter Wist appeared to be stunned. Thekla clenched her fingers so tightly against her palms that her knuckles were white. Her breast fluttered with her breathing. And Jack—there was no trace of good-natured indolence about him now. His face was transformed. He was startled, but exalted, by the revelation of his own feelings. For what he had said was true—and he had not known it until that moment.

At last Wist spoke. "She is not for you. What has she said?"

Jack turned to Thekla. "Come with me, dear. Leave this place. Come."

She shook her head. Her eyes were wet; her lips trembled. At that moment she could not have spoken.

Jack stepped nearer to her. "The ponies are there," he said in a low voice. "Thekla, I love you. Come with me. We will ride to the camp, and I will put you in the care of Larry's wife.

"I haven't known it, dear, until now. I have only known that every day seemed empty unless I saw you—that you were always in my thoughts. But now I know it is because we belong to each other, you and I. Thekla, dear, you care! Oh, you care!"

His arms were outstretched. All of love and devotion was his face, and the girl wavered. With her, too, this was a moment of self-revelation. She shrank from the glare of her own thoughts, but the compulsion of his feelings seemed to drag her to him. She raised her hand—took an uncertain step.

"Thekla!" Peter Wist's rough voice broke the spell. The girl sighed, dropped her hand, drew back.

"Thekla"—Wist's voice shook—"who is this man?" He pointed at Jack. "How long have you known him that you turn to him from your father? Would you leave me for him? He is a robber! You would be his toy.

"I know his kind—smooth—smooth. I am your father." He was stern, accusing, regal. "I have given you your chance to be what you are. I have worked for you—digging in the fields so that your hands would be white. Do you turn from me to him because his hands are white?"

"No! No!"

"Are you ashamed of me, Thekla?"

"No! No!" she sobbed.

"If you go from me, I shall think it was because I had made you too good for me—my daughter. And if you go, you need not come back."

With a hurt cry, she darted to her father and buried her face in his coat. All the old reproach of her disloyal feeling toward him and toward her home swept over her with agonizing emphasis.

Jack partly understood, but only partly; his own immediate pain of loss was too keen for him to see clearly.

He awaited the final blow.

Wist glared at him sternly. "Go away," he said. "Go away and do not come back."

Jack stood his ground. "I will do what Thekla wishes me to do. Look at me, Thekla."

She shook her head.

"Thekla, do you want me to go?"

She was motionless, her face still pressed against her father's coat.

"Thekla!"

He saw her fingers clutch more tightly her father's sleeve; but she made no sign, and at last heavily he turned and walked slowly away.

And, strangely, the impression that remained with him was not the clinging girl, but the grim, triumphant father—still suspicious, still embittered, but more a king than ever.

(To be continued.)

HELP FOR MEN WHO HELP THEMSELVES—NUMBER 28.

MAKING PASSENGER-CARS COMFORTABLE.

BY C. F. CARTER.

IF running a railroad were as easy as the silly-season correspondents imagine, there would be no excuse for paying high-priced men, and conducting costly experiments, to solve its problems. As a matter of fact, the hurling of a maximum of weight at a maximum of speed and a minimum of danger and discomfort, across a continent, involves difficulties which the general public knows absolutely nothing about. The difficulties are as unending as travel itself, and they progress with every step and line of development.

The Aims, Efforts and Difficulties of the Men Who Must Progress with Every Luxurious Wish, and Every Danger of the Traveling Public.

THE difficulties of making a railroad-train as comfortable as a hotel are obvious when one takes into consideration the limited space. But the public is a factor that takes no account of difficulties; and, if a miracle is required to produce a desired result, a miracle is demanded. The sleeping-car is a notable example, and the good and bad rimes and jokes launched upon a defenseless world about the limitations of this piece of rolling-stock would fill many five-foot shelves.

Railroad men have realized these limitations, too, and have sought, with the same tireless zeal with which they have grappled with the problems of the permanent way and motive-power, to overcome them. The cardinal grievance of full-grown travelers, the length of the sleeping-car berth—or, rather the lack of length—was adjusted some years ago by the Chicago, Milwaukee and St. Paul Railroad by the simple expedient of building longer berths.

Yet this is but one of the problems connected with rolling-stock, and, in the opinion of operating officials, not the most important. One of the things that promised a substantial reward to the inventor was to find a way to provide all the luxuries that are regarded by pampered travelers of to-day as necessaries, at less than the heavy first cost of a whole train of separate café, dining, parlor, and sleeping cars, for long runs and light traffic, and at less than the enormous expense of maintaining and operating such a train. The problem has

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been solved by the American Palace Car Company by the building of a single car which fulfils in itself all the functions of a whole limited train. Several of these cars are in use on the Canadian Northern, where they are giving satisfaction.

A Disguised Sleeper.

Starting in daylight from Port Arthur on its long journey into the northland, this new type of traveling palace appears to be a parlor-car, with observation and smoking rooms, and with twenty comfortable movable wicker chairs. There is nothing suggestive of the sleeping-car about it.

At meal-time the porter, who is also waiter, produces ten double tables from mysterious closets, which are spread with a full service of linen, china, and silver, such as is to be found in the best dining-cars, and upon which are spread not a buffet lunch, but an appetizing course dinner, as served on the crack trains of the trunk lines.

At bedtime the porter sets a couple of chairs aside, lifts up a trap-door, and begins turning a crank, whereupon there rises from the floor an upper and lower berth, longer and wider and higher than the usual berth. Chairs and hand baggage are stored in the cellar vacated by the berths, and the car is transformed into a comfortable ten-section sleeper for the night. The windows are unusually high, while the upper berths are ventilated and lighted from the outside.

An Interurban Luxury.

Another sleeping-car, which is disguised as a parlor-car during the day, is the Holland. Its chairs are fixed to the floor, and are folded down to form the berth.

The chief novelties about the Holland car are that the berths are long, that the curtains are sliding wooden partitions, which make each berth a private compartment, and that the fares are one-half those on standard Pullman sleepers. The first cars, operated by the Illinois Traction Company between Bloomington, Illinois, and St. Louis, have been so popular and profitable that the company will place similar cars on other runs.

Altogether it had been found easier to please the passenger than to do some other things. For instance, a difficulty that is growing more serious every year is to find suitable material from which to build cars. Even if wood were satisfactory, which it is not, it is getting so scarce and so costly that other material is necessary on the ground of economy alone. There are other and stronger reasons.

The motive-power officials of the Harriman lines have recommended the building of steel passenger-coaches. Experiments conducted by them have demonstrated that the cost of maintaining a steel coach is only half the cost of maintaining a wooden one. But the safety of the steel car in wrecks and fires is its strongest recommendation.

So far as the mere building of steel cars is concerned, that is easy. The first steel sleeping-car was exhibited by the Pullman company at the Jamestown Exposition, and it has been undergoing a trying out in regular service since then. The Pennsylvania Company in 1907 placed an order for two hundred all-steel coaches. They are to be built strong enough to stand a roll down an embankment without collapsing, and to stand an end blow of four hundred thousand pounds, while the end-wall frames are to be so strong that the superstructure cannot be swept off in a collision.

Thousands of steel gondolas have been built and are in daily use. To build steel box cars would be an easy matter, as the Union Pacific shops proved by building the first two early in 1907. Although of greater capacity than standard wooden cars, they weighed but 38,000 pounds, compared with 42,000 pounds.

An Experiment in Iron.

Indeed, the Baltimore and Ohio proved that it is, forty-six years ago, by building two hundred box cars of one-eighth-inch iron. The tremendous progress made since 1862 in producing machinery for the economical working of metal has greatly simplified that problem. When the Baltimore and Ohio had built its iron cars, however, its troubles were just begun.

Using iron or steel cars is a very different matter from building them. When the summer sun beat down upon those old iron cars the temperature in them was almost high enough for baking. General merchandise or anything else that was affected by a high temperature could not be shipped in them.

They could not even be used for lime-cars, as they would sweat and ruin all the lime. The only thing for which they could be used satisfactorily was scrap-iron.

Heat in Metal.

Any one who has been in a railroad yard full of steel gondolas in summer need not be told that they have an enormous capacity for absorbing heat. On a warm, sunshiny day they are often too hot to touch with the hand. A steel roof would greatly increase the inside temperature. It is claimed that the temperature in an all-steel car on a summer day would kill live stock and seriously damage grain and a large variety of other classes of freight.

In winter the changes of temperature would cause deposits of moisture from the atmosphere on the walls, such as is seen on locomotive-tanks, and this would cause serious damage to freight. From this it may be gathered that the problem of the steel car is by no means so simple as it might be.

The Ease of Theorizing.

The plain truth is that nothing about a railroad is nearly so simple to the men who operate it as to the outsiders who know nothing about such matters. Take the problem of safety appliances, for instance. Almost any plain citizen could take his pen in hand and in half an hour dash off a letter to his favorite newspaper that would illuminate all details of any question that could possibly come up in the next decade.

Yet mere railroad officials spend an astonishingly large part of their time considering safety devices without making any very rapid progress. So many inventions that work out to absolute perfection in patent specifications and drawings, and models that are infallible in exhibition tests, have a most unpleasant habit of failing miserably in actual service. Some of them prove to be downright dangerous.

Really, it isn't surprising that railroad managements do not spend more millions on wondrous mechanisms guaranteed by the inventor to work miracles when usually the inventors do not understand even the most elementary facts about the operation of such a simple piece of mechanism as a car-wheel.

It is simply amazing to discover how many complications can arise from that humble metal disk. The problems assume considerable magnitude when it is remembered that nearly two and a half million freight-cars in the United States each have eight of these trouble-makers.

The Elusive Car-Wheel.

A great deal has been learned about the car-wheel recently as a result of some very curious and spectacular experiments.

Previous to 1905 little was known about car-wheels, except that they were of few days and full of trouble for the operating department.

When cars of 100,000 pounds capacity were introduced the wheels lasted only half as long as they had under the cars of 60,000 pounds capacity. It was concluded that part of the trouble arose from long continued and heavy pressure of the air-brake shoes, which heated the wheels, expanding the rims and thus reducing their strength, causing flanges to break and ditch trains at most inconvenient places. Yet this theory did not cover the entire case.

Experiments were begun by breaking the flanges off of ordinary cast-iron wheels in a testing-machine. Some of them broke at pressure as low as 45,000 pounds, while the best gave way when a pressure of 100,000 was applied. Steel wheel flanges stood 526,612 pounds.

The next step was to ascertain if the pressure on the flanges in going around curves—the lateral thrust as it is called—in actual service approached nearly enough to the minimum strength of the wheels as ascertained by the testing-machine, to be dangerous. The lateral thrust is largely caused by the tendency of the wheels to roll in a straight line.

In going around a curve the wheels must slide laterally, and also longitudinally to an amount equal to the difference between the length of the outer and inner rails. The resistance of the trucks, which must be turned on the center plate and side bearings to an angle with the car body and then straightened back again at the end of the curve, also increases the lateral thrust.

Flashlight Measurements.

To settle this point, a section three feet long was cut out of the outer rail on a curve of 1,307 feet radius on the Hickory branch of the Pennsylvania Railroad, and so arranged that it would be held firmly in the track, yet free to move out enough to exert a pressure on a hydraulic cylinder.

The measuring apparatus attached to this section of the rail had to be heavy enough to withstand the thrust of the heaviest locomotive as it rounded the curve at high speed, yet so light that the effect of the inertia of the moving parts would not affect its operation. It had to be so sensitive and so rapid in action that the pointer would register the thrust of a passing wheel and get back to zero in time to register the next.

That meant very quick action, for the wheel base of an ordinary freight-car truck is five feet two inches, and at a speed of forty miles an hour the interval between the two wheels would be eighty-eight thousandths of a second.

The recording instrument was placed on a table seven feet from the track and connected with the hydraulic cylinder by a brass pipe. The speed of the passing cars in a train was registered at the same instant as the lateral thrust by two trips, sixty-six feet apart, which were adjusted to be struck by the journal-boxes.

At nine miles an hour the lateral thrust of passing wheels on this curve varied from 2,260 to 7,210 pounds; at twelve miles an hour, 7,070 to 10,605 pounds, and at thirty miles an hour, 9,190 to 12,865 pounds. At higher speeds the pressure ran up to 30,000 pounds, or two-thirds the minimum strength of a cast-iron wheel flange. This was altogether too small a factor of safety, so it was concluded that cast-iron wheels were dangerous when placed under a modern high-capacity car.

Centrifugal Force?

That was pretty good for one lesson, but it was only a beginning in the study of curve mechanics. The railroad world realized this when, on February 16, 1907, a New York Central train of five cars, drawn by two electric locomotives, in going around a three-degree curve with a radius of 1,710 feet at Woodlawn, was derailed — four of the coaches being thrown over and partly destroyed, killing twenty-four persons and injuring one hundred. The point was emphasized six days later, when the Pennsylvania special—the eighteen-hour train from New York to Chicago—was derailed on a three-and-one-quarter-degree curve at Mineral Point, Pennsylvania, while running at fifty miles an hour.

The newspapers promptly announced that the centrifugal force of the New York Central train, in rounding the curve, threw it from the track; but the railroad engineers declined to accept this theory. They demonstrated that, with a superelevation of four and one-half inches on a three-degree curve, a speed of one hundred and twenty miles an hour was required to tip the train over.

They also pointed out that the accident at Salisbury, England, was the only one in many years caused by centrifugal force. As the train at Salisbury rounded a ten-degree curve with only three inches superelevation at sixty miles an hour, it simply had to tip over.

A Newspaper Race.

In order to find out what really was the matter with track or equipment, both roads undertook a series of experiments. One point that interested both roads was what difference, if any, there was between a steam locomotive, with its large drivers, and an electric locomotive, with its shorter wheel-base and smaller drivers, in rounding a curve.

For several days in October, 1907, Pennsylvania engineers stood near a lonely curve near Franklinville, New Jersey, watching a steam and an electric locomotive thunder past at speeds of sixty to

one hundred miles an hour. The newspapers concluded this was a new sort of race-meet gotten up to determine which could run the faster, steam or electricity, and so gave long reports daily, which could not have failed to edify the sporting fraternity as much as they did the engineers.

The New York Central experiments showed that, while a steam locomotive at forty miles an hour exerted a lateral thrust of 6,120 pounds in rounding the experimental curve, an electric locomotive only registered 4,740 pounds. At sixty miles an hour, the lateral thrust for steam was 11,230 pounds, and for electricity 10,470 pounds. At eighty miles an hour, the thrust was 21,160 pounds for steam and 18,360 pounds for electricity.

By far the most elaborate experiments ever made with a view to the solution of problems connected with rolling-stock was the series undertaken by the Studiengesellschaft of Germany, assisted by the ministry of public works, the last of which was held in 1903. An experimental track was laid from Berlin to Zossen. The department of public works supplied the material and money, and soldiers were detailed to do the work.

Something in Speed.

The Studiengesellschaft had only to conduct the experiments. The object of the test was to find out how the car and its various parts acted at very high speeds in order that defects might be remedied, and to study the resistance of the track and the atmosphere, and how best to overcome them. Tests were made at various speeds up to one hundred and twenty-four miles an hour.

The results strongly emphasized the importance of careful design and good construction for trucks of cars destined to run at high speeds. Smooth running was possible only when the load was equally distributed on the axles.

Specially constructed swivel trucks of longer wheel-base and wider lateral play than ordinary were found to run more smoothly at one hundred and twenty-four miles an hour than the high-class cars on through trains at one-half that speed. A sleeping-car with six wheel-trucks taken from its regular run for the test, began to sway so dangerously at one hundred and eleven miles an hour that the experiment had to be stopped.

Finding Safety Limits.

The danger-line in speed on curves was found to be one hundred and thirty miles an hour. On entering a curve, the truck follows the rails, while the car body runs straight ahead until the tension of the springs becomes great enough to overcome this tendency, when the car body swings over and runs smoothly.

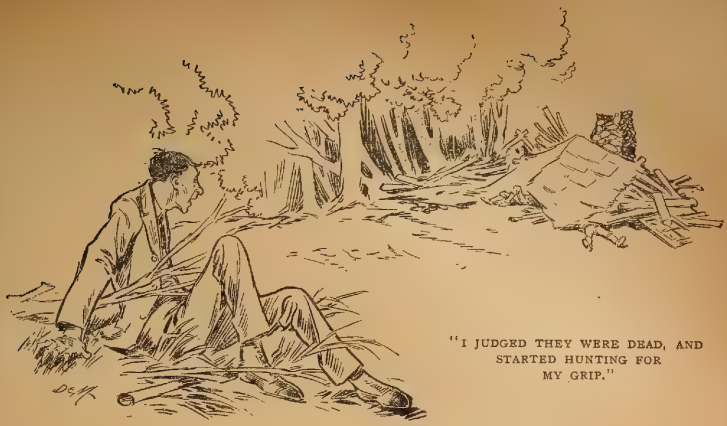
The tendency of the front wheel of the truck to climb the rail was so great at extreme speeds that it was found necessary to put guard-rails on tangents as well as on curves.

An interesting point on which the first authoritative data was collected at the Berlin-Zossen speed trials was the resistance of the atmosphere of moving trains. This atmospheric resistance has always been something of a bugaboo to the more conservative, while the other kind of railroad engineers have not given it the attention it deserves.

The Obstinate Atmosphere.

The first serious attempt to deal with atmospheric resistance in the United States was made by F. U. Adams, a reporter on the Chicago *Tribune,* who, eighteen years ago, was sent to write up a locomotive which, the inventor claimed, by using a driving-wheel sixteen feet in diameter running upon a single rail, instead of the customary two, could make the run between New York and Chicago in one hour.

The second instalment of this article will appear in the January number.



"I JUDGED THEY WERE DEAD, AND STARTED HUNTING FOR MY GRIP."

CARRYING THE BOODLE TO CASEY.

BY E. FLORENCE.

Uncle Monk, with a Can of Dynamite, Tries To Do a "Message-to-Garcia" Stunt.

THE Loose-jointed Individual reclined in the shade of a tree by the roadside, serene and content, watching the approaching figure on the highway. As the traveler halted and gave the high-sign of the fraternity, he said:

"Welcome, brother, to my arboreal abode. Enter within its cool shade and shake off the rigors of your personally conducted pilgrimage."

"Thanks, my lord," replied the individual with the De Bergerac nose, "I am weary with walking. My motor has served me a scurvy trick, hence the necessity of this ambling advance. Have a smoke?"

The Lean-and-lanky One extracted a hostage from the tobacco-bag of his guest, and filled and lighted his pipe. Under the mellowing influence of the aromatic weed, his mind took a reminiscent turn, and he started off like a parlor phonograph with a new record:

"Say, pard, was you ever initiated into any of those secret societies where you have to do a lot of fool things for the amusement of a lot of overgrowns? Have you ever unconsciously acted like a post-graduate student of a Bloomingdale correspondence course in lunacy, or been 'it' for the delectation of the bunch of speed-breakers in the land of the midnight fun?"

"Well," replied De Bergerac, "I have never shone as a vaudeville luminary; but, in the production of merry mirth, I calculate I have contributed somewhat to the risible reserve of the nation."

"My boy," resumed the Lean-and-

lanky One, "I was just thinking of the time when I was the star performer in a comedy drama that was a howling farce to the initiated audience, but a sort of 'your-money-or-your-life' experience to your Uncle Monk."

"Nothing can spoil the pleasure of a good smoke, so let's have your yarn," ventured De Bergerac.

"This adventure happened in Pennsylvania, whither I had drifted after blowing out of the Sunflower State. I was holding down a job as extra man in the office of the P. and A. R. R., not a great distance from that section of the country where the Molly Maguires had flourished some years previous.

"My duties consisted of doing anything for which my abilities fitted me, and the superintendent fed me on such a liberal diet of work that it was a wonder I didn't contract indigestion in my labor organization.

"He ordered me, one day, to go to a certain station up the road and secure a package which had been expressed earlier in the day, and to deliver it to its destination, which I would learn from the station-master. Owing to an accident on the line, I was unable to get away until about 3 P.M., and then I was compelled to take the freight and ride in the tonneau of the caboose.

"The funereal cortège landed me at my station at about four-thirty, and I hurried to present my credentials to the station-master. As he looked them over, I imagined I saw a grin lurking in the corners of his mug.

"As it disappeared he said, 'I am to deliver to you a package of money for the semimonthly pay of the men up at the lumber-camp, which is situated on the other side of a spur of the mountain. You have a good five-mile tramp before you, and should be able to reach there about dark. You simply have to follow the road to and across the spur, which is shorter than going around.

"'There is no danger of going astray if you keep your eyes open. I'm glad you have come to relieve me of the money, as I will feel easier with it off my hands.'

"'Why, there's no danger in this joyless paradise, is there?' I asked.

"'No, not ordinarily,' he replied. 'But word has come over the wire that the Sweeney boys have broken jail. As you know, they are notorious outlaws, and they make these mountains their headquarters.'

"'Gee!' I commented. 'And here's me carrying the coin to Casey without so much as a putty shooter to protect the company's pay-roll. You don't happen to have a blunderbuss handy, that I could borrow?'

"'No,' he answered; 'I have not. But I have made up a dummy package for you, which may help you outwit any one who may tackle you. The genuine package is sealed with red wax, while the dummy is sealed with black. But for that, you couldn't tell them apart.'

"I handed him my grip, and he placed the two packages in it. I thanked him, and was about starting off, after getting explicit directions, when he said:

"'By George! I nearly forgot. You are to take this can of dynamite up to Casey. He needs it to blast out tree stumps, to clear a wagon road so that he can haul his timber out.'

"He handed me a can — something like a dinner-pail, only smaller—painted a bright red, with the word 'Dynamite' painted on it in white letters. I didn't like the idea of lugging that canned destruction along, but the station-master said Casey had to have it.

"I slung the strap of my grip over my shoulder and started off, carrying the can by the handle, and you can bet I carried it carefully. I knew that if I dropped it, pay-day for those woodchoppers would be postponed and I would be post-mortemed.

"Weighing my chances of being held up, I hiked along. Shortly the sky became overcast, and I knew that I was in for a wetting unless I reached shelter. As I neared the mountain I heard some one calling, and on looking around I saw a lad running toward me and beckoning for me to wait.

"When he came up, he asked me if I was going to the lumber-camp, and, if so, would I take a letter to his father, who had gone over the day before.

"I assented, and he gave me a letter, addressed to 'Bill Jenkins, sheriff.' I hurried on, being anxious to reach the

shelter of the timber, and in a short time I reached the wooded slope and started the ascent.

"After proceeding a short distance I beheld a cabin in the clearing to the right, and decided to investigate. There was no evidence of habitation, so I walked up and knocked. There was no response, so I pushed open the door and entered.

"I found myself in an ordinary mountain hut, of one room, with a large, open fireplace to one side. Suddenly I discovered that the can of dynamite was missing, and I realized that I had put it down while waiting for the lad to overtake me, and had forgotten to take it up again.

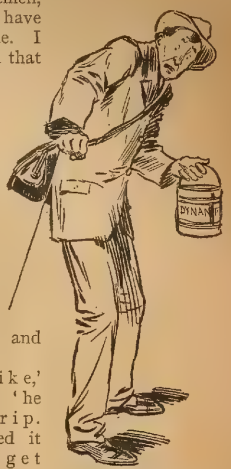
"There was nothing to do but retrace my steps and secure the can. I decided to cache the grip and get it on my return, and found a good place up the chimney. Hurrying back, I found the can where I had left it. Securing it, I again made for the hut, and as I was about entering I heard voices inside.

"Some one was evidently inside, so I cautiously peeped in. Two men were kneeling on the floor, with my grip between them. One of them held an open letter, which he was reading, and I judged it was the one that had been given me for delivery to the sheriff.

"'Say, Tim,' he said. 'This here letter won't never be delivered to that big galoot who put us away. He'll find out soon enough that we have made our getaway. These packages look like they has money in them, so I guess we'd better fade away before the owner comes along with a baggage-check and claims his grip.'

"'He can come, and be blowed! This ain't no claim office. What he'll get will be plenty, and it won't do him no good if he comes moseying around here,' growled the one called Tim.

"I stepped boldly into the room and said: 'Gentlemen, I fear you have made a mistake. I happen to own that grip you are taking liberties with, and I will thank you to hand it over.'



"A STRAY DOG HAD HOLD OF THE PACKAGE, WHICH HE HAD EVIDENTLY MISTAKEN FOR A RABBIT."

"They had both jumped up as I entered, and as I finished they looked at each other and grinned.

"'Say, Mike,' says Tim, 'he wants this grip. He won't need it when we get through with him, will he?'

"With that they both made a move toward me; but, raising the can of dynamite above my head, I said: 'If you two amateur highwaymen don't want to shuffle off by the dynamite route, you'd better be good. Hand over that grip, or I'll make mixed Micks of you.'

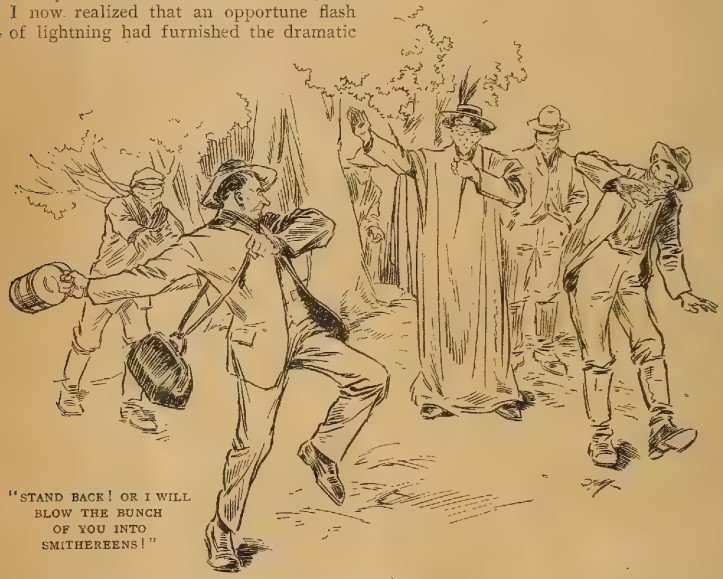
"They stood, hesitating, while I held the can aloft, ready to throw it at the first hostile move they made. Outside, the storm had broken, and the crashing of the thunder furnished the fitting effect for our little drama.

"I watched them closely, and as they both made a rush, I hurled the can to the ground, jumping back through the open door as I did so.

"As it struck there was a flash and a roar, and the cabin collapsed. When I recovered consciousness it was dark, and the moon was shining through the trees. It was some time before I could locate myself, but gradually everything came back to me.

"I arose and looked around. The cabin was a wreck, and I saw the outlaws pinned down beneath the heavy timbers. I judged they were dead, and started hunting for my grip, thinking it might possibly have escaped destruction. I found it intact, and the next thing I saw was that can of demolition powder smiling at me from amid the wreckage.

"In my excited state I had thought the dynamite had caused the wreck, but I now realized that an opportune flash of lightning had furnished the dramatic



"STAND BACK! OR I WILL BLOW THE BUNCH OF YOU INTO SMITHEREENS!"

dénouement to my heroic stand. I didn't bother trying to find out why the dynamite had not exploded, but, gathering my paraphernalia, I started afresh on my interrupted journey.

"The darkness and the solitude got onto my nerves, and I wondered whether there were any more highwaymen waiting for an easy mark. After proceeding some distance, I stopped to make sure the packages were all right, and found them undisturbed.

"I decided to adopt an extra precaution for the safety of the package with the red seal, and, taking a fishing-line which I happened to have in my pocket, I tied it around the package securely. Then I took hold of the line by the end, and proceeded, dragging the package after me, fifteen or twenty feet to the rear.

"I calculated that if any one held me up, I could drop the end of the line, and the package would not be discovered.

"I had proceeded about half a mile in this way when, suddenly, I felt something tugging on my line, just like a bite. I tried to pull in, but whatever it was had nabbed my precious bait, refused to give an inch. Finally, I tied the loose end around a tree and followed the line back to find out what I had caught.

"I found that a stray dog had hold of the package, which he had evidently mistaken for a rabbit or something, and was trying to shake the life out of it. I tried to shoo him away, but he wouldn't shoo; so, losing patience, I soaked him on the head with the can and laid him out.

"Then I realized that, for the second time, that feminine gunpowder had

failed to make a demonstration when provoked. Securing my package, I rolled the dog into a convenient gully, and proceeded as before, trailing the package, like an innocent little Lord Fauntleroy kid dragging a diminutive red wagon.

"But it seemed that I was doomed to catch it from all sides, for suddenly I felt the other end of the line going up into the air, and my hair promptly did the same.

"'What's the matter with this enchanted mountain?' says I to myself as I tried to draw in on the line.

"It was just like flying a kite in a high wind, for whatever had hold of the other end fought hard; but finally I got the thing started, and it came toward me with a swoop, when I realized that I had been kite-flying an owl. I made a bat at it with that non-responsive dynamite, and it released its hold and flew into a tree, where it started to make a noise like a locomotive in distress.

"After that, I put the package into the bag and proceeded in a rational way, thinking it better to meet danger than to fish for it.

"As I continued on my way, the owl kept up its Caruso solo. It rather annoyed me to have a nocturnal canary asking 'Who?' 'Who?' In a short time answering calls seemed to come from all quarters of the mountain. It did not take me long to realize that there was a method in these calls, and that they were gradually drawing nearer in a narrowing circle.

"Finally, on reaching a clearing in the timber, I realized that I was surrounded by a troop of ghostlike figures, each one wearing an improvised mask.

"The most prominent figure in the group was a woman, who looked like a veritable giantess. Like the rest, she also wore a mask, while her cloak fell in easy folds from her shoulders over a massive figure.

"'Who have we here?' she asked.

"'Who? Who?' piped the opera-bouffe chorus.

"'An enemy to the cause,' came from one of the figures in a voice that sounded familiar.

"'Step forward and make your plaint, my son,' commanded the massive Brunhild.

"'Good mother,' replied the owner of the voice, stepping forward, 'the oppressors of the poor have sent this man into our midst with money to pay the men who are ruining our retreat by cutting down the trees. Since entering our domain, he has wrecked our cabin and nearly killed two of your loyal subjects. He has laid violent hands on our watch-dog and spoiled his bark, and he has offered indignities to the pet of the clan —the sacred owl.'

"As the speaker proceeded, I recognized him as one of the men who had held me up in the cabin, and whom I had left for dead among the wreckage.

"'Son of iniquity!' thundered Brunhild. 'What have you to say?'

"'Nothing,' I replied, 'that I care to say to this bunch of masqueraders. My sole wish is to continue on my way, and continue quickly.'

"With that, I attempted to break through the circle, but the fellow who had summed up the indictment barred my way.

"'Stand back!' I shouted, 'or, by Heaven! I will blow the bunch of you into smithereens.' I raised the can of dynamite above my head, that all might see it.

"A mocking shout of laughter greeted this threat, and the fellow called Mike asked: 'Is that a new kind of explosiveless dynamite you are armed with?'

"'No,' I replied; 'not when it hits something hard, and it's going to hit the hardest thing in this locality right now.' And then I let it drive straight at his head.

"He ducked, and the can sailed harmlessly by and was caught by the man behind him, while I was seized and held by a number of the other heavy villains.

"The one who had caught the can handed it to Brunhild, who pried off the lid, and said: 'Boys, here's a treat for you. A canful of good old rough-and-ready tobacco. Now you can smoke and chew to your hearts' content.'

"You can bet it jarred me to learn that I had been carrying a harmless can of tobacco around, under the impression that it was canned destruction. The

tobacco was distributed, and Mike remarked:

"'Now, friends, why not burn up the pay of those tree-chopping vandals while we are burning up this good tobacco?'

"This proposition was greeted with a shout, and the maker of the motion took the packages from the grip. Several of the others busied themselves making a fire, and when it had gotten fairly started the packages were tossed into the flames, while I struggled to free myself and prevent this mad act.

"When the packages were consumed, the massive Brunhild raised her mighty hand and commanded silence. 'My sons,' she asked, 'what is to be done with the prisoner?'

"'Why not do with him as with all the other enemies of the cause?' spoke up Mike.

"'Enough of bloodshed,' replied the chiefess. 'I have a plan. It would be a shame to sacrifice a man as brave as he. Since my Tim died, I have looked in vain for a man to fill his place. This man seems like a bonny lad, so what do you say to my taking him for better or for worse? And bad cess to him if it's for worse.'

"This proposition was received with shouts of approval, and when they had subsided I entered a protest, and swore I would never consent.

"Brunhild approached, and, facing me, said: 'Think well before you refuse to do the bidding of a lady. My brave boys will not stand for a refusal; and before speaking the word that might mean your destruction, I entreat you to look upon the fair face you would renounce.'

"As she ended, she tore off the mask, and I beheld the bearded face of Casey, the biggest devil in four counties.

"'What the heck!' I stuttered, while the rest of the outfit pulled off their masks and executed a wild dance around me, shouting with laughter.

"'Monk, you barbarian,' roared Casey, 'you are now a full-fledged member of the Brotherhood of Joy. You stood the third degree bravely, and we are proud of you.'"

"And the whole thing was a joke on you?" inquired De Bergerac.

"A rank farce, hatched out by Casey. He had gone to the station earlier in the day and secured the money, and fixed up the scheme with the station-master. The whole outfit of opera-bouffers and heavy villains was nothing more than Casey's wood-choppers.

"Of course, we had a royal blow-out at the lumber-camp that night; but I'll bet that the man who carried the message to Garcia didn't have half the excitement that I did in carrying the boodle to Casey."

"A very interesting story," commented De Bergerac. "I am weary; so, with your permission, I will reel off a few yards of sleep. Should a car approach that looks as though it might be mine, kindly instruct the choffer to await my awakening, and I will give you a lift."

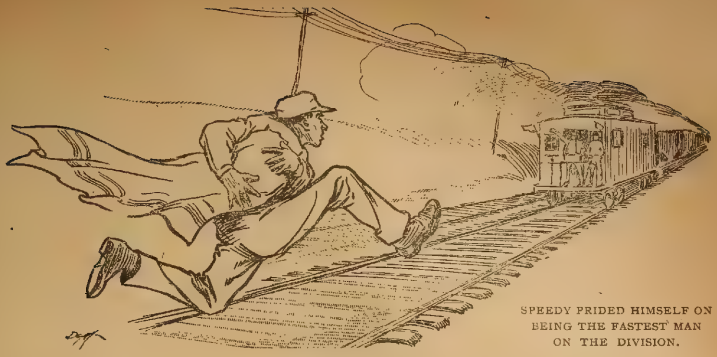
NEW YORK'S ABANDONED RAILWAY.

NEW YORK State has an abandoned railroad line some fifty miles in length—not an abandoned project merely, but a line on which rails were actually laid and trains operated at one time.

In the seventies, what is now the New York, Ontario and Western Railway, then the New York and Oswego Midland, had a line extending from Norwich, in Chenango County, to Scipio, in Cayuga County, a distance of 78.5 miles, as reported in Poor's Manual for 1877. This line apparently ran north from Norwich to De Ruyter, then southwest to Cortland, and then northwest to Scipio.

The distance from De Ruyter to Cortland is something like twenty-two miles, and that section, in about 1878, was leased to the Elmira, Cortland and Northern, and from the remainder of the line—fifty odd miles—the track was taken up some time during the year 1881.

It is understood that the New York, Ontario and Western still owns the right of way, but the circumstance is not referred to in any of the recent reports.



SPEEDY PRIDED HIMSELF ON BEING THE FASTEST MAN ON THE DIVISION.

Being a Boomer Brakeman.

BY HORACE HERR.

RAILROADING is a pretty serious business, and the Arizona In and Out System is just as seriously conducted as any other line, be it large or small. But it has its human side, too, and the boys love to play jokes on one another. Mr. Herr's ambitious hero recounts many that fell within the range of his experience in the railroad business.

3.—THINGS WHICH BREAK THE MONOTONY.

Some of the Yarns You Hear Before the Call-Boy Comes and You Sign Up for Another Round Trip and More of Cæsar's Coin.

RAILROAD men are only human. They have their jokes, their adventures, and enjoy them the same as any one else. They go about looking for a laugh, just like the rest of the world; and although I am inclined to think that they seldom lose sight entirely of the fact that every trip may be the last, still they don't let it make their face take on a quinin expression, and they don't lose much sleep worrying about the troubles of to-morrow.

A great deal happens to break the monotony of the first-in and first-out service. One day it's a joke, the next day it's a bit of sentiment, but it all serves its purpose.

Rube was one of the best conductors who ever let a stinger do the work. He knew every turn of the railroad game, and spent all his spare time playing practical jokes and poker; and he generally got the best of it at both games. He never got

excited in a pinch, and he could laugh just as hard when looking into the face of a head-end collision as he could when peeking over a full on aces.

He believed that the world was made to live in, and that money was manufactured to be spent, and he sure lived and spent to the limit of his whole-hearted creed. I knew him by reputation long before I climbed onto his dog-house for my first trip, and I was much elated to think that the extra-board had been juggled so that I caught his car.

One on Speedy.

Speedy—never mind his last name, every one knew him as Speedy—was braking behind, and I was on the smoky end; and Speedy and Rube made the liveliest pair that ever kept company month in and month out over a Western division.

Speedy prided himself on being the fastest man on the division when it came to closing and locking a switch and catching a caboose, and Rube, in his rough way, used to hand him the josh at every turn of the game as the slowest mortal that ever lived.

Pulling out of Adamana, one morning, after having been in on the siding for the varnished cars, I let them out and stood at the switch and let the string drag by looking for brakes sticking.

When the caboose came along, I climbed on, and Speedy dropped off to close the switch. Rube stood in the door and watched him and handed him out a line of talk about like this:

"Heaven's sake, you mut! Can't you hurry a little? Do you want us to stop so that you can catch up? Holy smoke, but you're about the slowest mortal I ever saw!"

By that time Speedy had the switch over and locked, and was starting to run after the caboose. Rube ran back to the rear of the car, picked up Speedy's bedclothes, opened the rear window, and yelled:

"Say, you'll need your bed if you're going to stay there all night," and with that he dumped them out of the window.

Speedy made a great scramble for the two blankets and the pillow, and finally caught the rear end, absolutely winded and mad as a hornet. Rube laughed over that for a week, before he got another chance to pull off the same stunt at the same switch.

He repeated the performance from that time on, every time we pulled out of Adamana siding, until Speedy stopped him in a neat little way of his own. Going into Adamana one morning, he waited until Rube was busy in the office of the caboose, and then he changed the bedding on the bunks, and put Rube's blankets and pillow on his own bunk.

When Speedy swung off to close the switch, Rube, as usual, gathered up what he supposed was Speedy's bed. Speedy didn't pay the least attention to them, left them lying on the track, jumped on, climbed up on top, and began to whistle. Rube tumbled right away that he had thrown his own bed off, and the way he pulled the air on the hog-head didn't trouble him. Walk back and get them? Not for little Rube! He made the engineer back up until he gathered up that bed, and then gave him the high ball. That was the last time Rube took liberties with Speedy's bed at the switch.

After both Rube and Speedy had received their walking-papers, they went into the poker business together and cleaned up quite a nice little sum. It was said—and with a great deal of truth, too—that Speedy never lost a gambling proposition but once, and that was a bet on a horse-race; and as every railroad man who was in town the day of that race attended the event, it is just as well that we recount it here as one of the things which shattered the monotony that month.

Speedy Gets Lou Dillon.

Speedy bought a range horse one day that had a local reputation as a runner, and, just to be in fashion, he named the nag Lou Dillon. He almost drove every one crazy about Lou Dillon, until one day old Ed Sawyer came in from the sheep-range and heard some of his remarks about that famous horse's running ability.

Sawyer was a real sport. He stood it as long as he could, and then he broke in:

"That old plug of yours couldn't beat a sick burro."

Speedy exploded right there, and of-

fered to bet one hundred dollars that his Lou Dillon could beat anything in Arizona, any distance; and Sawyer called him.

"I've got a lop-eared burro out at the sheep-camp, and I'll bet you, old skate, and we'll run the race here in town a week from Sunday."

It was arranged, and Speedy was so confident that he agreed to give the burro ten yards handicap and run under any conditions which Sawyer might impose. The date arrived, as did Sawyer, the burro, and the crowd.

HUMPY CAME RIGHT THROUGH THAT BARBED-WIRE FENCE HEAD FIRST.

Just a Bit Gun-Shy.

When everything was ready, Sawyer led the way to the only real alley in the town. When the bunch arrived at the alley, he made known the conditions of the race. The horse and the burro would run one block down that alley, Speedy to ride the horse and the burro to run free. It was agreed.

Speedy mounted the famous Lou Dillon, and Sawyer led the burro up to the ten-yard mark. Sawyer happened to know that Lou Dillon was gun-shy and at the sound of an explosion would bolt and run any old way.

While a Mexican sheep-herder held the burro, Sawyer went over to a near-by yard and resurrected a large five-gallon tin can, produced several large giant firecrackers from his pocket, twisted the fuses together, tied the can to the burro's tail, lighted the fuse, and dropped the firecrackers into the can.

"When the first report comes, start," was all he said.

Say, I never saw and never expect to see another such race in my life. When that first firecracker popped, Lou Dillon made a fancy pivot-swing. Speedy did a double flipflap and came down on his

back in the middle of the alley. When he came to, the race was over.

Lou Dillon ran a great race, but she went the wrong way, and the burro, frightened by the racket at his extreme appendage, made a fair record straight down the alley, winning hands down—or, to be more exact, "tail down." Speedy lost that bet, and Lou Dillon was placed on the market the next day.

A Hagenback Stunt.

But to get back on the second division with the crew! After Rube left the road by request, Humpy Lowe caught the car, and things went along very fine for several months. I want to tell you about the time when I received my introduction to Humpy.

He was great on hunting, and one day old George Robinson, myself, and Humpy went out dove-shooting. We were passing down through a range place, when we noted a big Jersey bull standing in a lot near by, pawing the earth as if anxious to demonstrate to some one that he was the king of the range.

I can't imagine what put the Hagenback stunt into Humpy's head, but he suddenly remarked that he could walk right up to that bull and scratch his head behind the ears. I didn't call him a liar, but I thought it, and he must have read my thoughts, for he crawled through the wire fence and walked toward the bull.

Mr. Bull stood for it, too. Humpy walked bravely up to him, laid the shotgun on the ground, and, with a few sweet words of cheer, began to scratch the bull behind the ear, calling to us that this talk about bulls being vicious was all a fake. Then he started to walk away.

As he bent over to pick up his gun, something happened, and Humpy came right through that barbed-wire fence, head first—without his shotgun, too.

Humpy never had much to say about the innate gentleness of the bull race thereafter, and he remarked, after he had picked the cacti from his anatomy, that it was almost the worst rear-end collision he had ever been in.

For several weeks after Humpy caught the car, there was nothing to do but ride and draw the pay and ride some more, with an occasional hot box to pack, or a brass to put in—just enough work to keep a fellow in practise. It seemed as if good fortune had camped on the division for a few months, and nothing happened of a serious nature, except that Jack Brisco, driving the limited at about fifty miles an hour, hit a stray car of flour at Gallup one day, split it right in two, painted six coaches white, and not a soul was hurt and not a wheel went off the rail.

There was nothing more serious than Porter's derailment at Aztec, where he hit a curve one afternoon during a sandstorm and found the sand drifted over the rails. Of course, he took out across country. The engine went down an embankment, turning over twice, but no one was hurt except Porter, who broke his nose.

Then there was Jack Williams's catching up with Shorty Riggs's caboose, at Cosnino. Jack was drifting down the crooked track beyond Cosnino, pulling a passenger-train. He was trying to pick up about fifteen minutes on the schedule, and I guess he'd have done it all right if Shorty Riggs hadn't been so thoughtless as to leave his caboose sticking out of the siding onto the main line.

Jack couldn't turn out and go round, so he proceeded to go through it, made a nice lot of kindling-wood, put the 421 over against the bank on her smoke-stack, and Jack took to the air-line down a forty-foot embankment of rip-rap, broke his leg, and lost his diamond ring.

Some Speed Yarns.

While things were running so smoothly I got acquainted with the bunch a little. We would get together over at the reading-room, and play sluff and pool and railroad until the boxes smoked and the rails were worn smooth. Ever run up against that brand of railroading known as "street-corner running"?

Well, some of the most marvelous records of speed and some of the most miraculous escapes have happened right around at the corner grocery or over in the reading-room, four blocks from the railroad.

You'll hear some tallow-pot tell how they started out with forty cars behind a Baldwin hog, at twelve miles an hour, and by the time he's half-way over the

"I'D DO THAT MUCH FOR THE DIRTIEST HOBO ON THE PIKE."

division he's running just exactly one hundred and two and three-tenths miles an hour, and could have beat that a little if the front end hadn't choked up.

You'll hear the poor, downtrodden brakeman tell about the "pickin'" being mighty poor, and the switchman telling how many draw-bars they have broken in the last ten years by shoving the cut too hard. The low-water fiend will tell the merits of his system, and some tallow-pot with a grievance will assure you that he couldn't keep the 660 hot because Old Dad Nance kept enough water in her to float a battle-ship; and so it goes.

"Hinkley" John's Pride.

Everybody talks shop until the call-boy comes, and you sign up for another round trip and more of Cæsar's coin. It is in such a gathering that you hear the unwritten legends of the road. Many of them are based on fact, but fancy has added much.

One of the stock stories on the Arizona In and Out I know to have been a fact, and it's worth telling for the simple reason that it shows that railroad men are just human like every one else, and that there is a little sentiment hidden away even in such a man as "Hinkley" John Reynolds.

Hinkley John was an engineer on the second division. He derived his nickname from the little Hinkley engine which he used to run in passenger service, and he was known over the whole road as the crankiest man who ever pulled a throttle. But he could run them, and he had nerves of steel.

It was several years back, the exact date—well, I would refer you to a bald-headed fellow who travels under the name of Hen Murray, and who is probably drifting around the United States, still following the railroad game. He was the fireman on that great trip.

Hen ought to know all about it, for he says that it was the fastest ride he ever cares to take, and he held his place with Hinkley, as he was about the only fireman

on the division at that time who could satisfy the old man. Things always happen in a hurry on a railroad.

One afternoon when everything was going nicely, along came a message from headquarters saying that Mr. So-and-So was rushing across the continent in a race against death, to reach the bedside of his dying wife. The order was to put the best engine and the best available crew on the three-car special, give it the right of way, and make all the time possible.

He Had to Double Back.

The roundhouse got busy, and Hinkley John, just in from his regular run, tired and worn out, was called to double back on that special. Of course, he grumbled—that was to be expected—but he climbed back up on the Hinkley, after the hostler had coaled and watered her, and pulled down below the cut-off switch to await the arrival of the special. "Red Hot" Frost was the conductor.

The special arrived, and Mr. So-and-So proved to be a steel magnate of Pittsburgh, Pennsylvania. He came over to the engine and told Hinkley just how matters stood, and ended it with:

"My friend, please do the best that you can. Run her just as fast as you can and not place yourself in danger. If I don't get there, I want to die trying."

The orders were read and signed, "Red Hot" Frost gave Hinkley the high ball, and with a toot-toot he was off.

Did he run? That record from Winslow, Arizona, to Albuquerque, New Mexico, has been the envy of every engineer on that division ever since, and it has never been equaled by twenty minutes. Scotty's flier wasn't in it.

Hinkley had the right of track over everything. In fact, the road was practically tied up while the extra passenger raced over that two hundred and eighty-six miles of track. Hinkley was only supposed to pull it to Gallup, a distance of one hundred and twenty-eight miles, but, going through Manuelito he threw off a message to the despatcher stating that his engine was running nicely, and that he was willing to pull the special to Albuquerque, and if everything was O.K. to have the yard-crew at Gallup high-ball him at the west switch, and he'd go on through.

The racing fever was on him, and that message set the despatchers afire. They cleared the yard at Gallup, and the crew gave him the high sign as he came around the curve into the station. He went through that town so fast that people swore that there was only one car in the train.

On over the continental divide he went, and down the eastern side, and when he hit the down grade from Gonzalez to Isleta he ate up the track at something better than a mile a minute. The train-sheets will show that the statement is a fact, and "Red Hot" Frost, now gray-headed but still in the service, will tell you that it was one of the greatest runs ever made by a steel horse.

He came thundering into Albuquerque three hours better than the time the head office had guaranteed, and when he stopped, the passenger was off the coach and at the engine before the switchman had the Hinkley cut off.

He reached up for John's grimy hand and almost squeezed the fingers off. "If I get there in time, I will remember that Mr. Reynolds did it," he said, and handed him a check.

Money Didn't Change Him.

In the meantime he had climbed up on the deck of the engine. John took that check and looked at it, and right here is where fancy has probably played its part with the story.

Some of the boys will tell you that it was for five thousand dollars, and some claim that it was for two thousand, but the fact remains that it was for quite a sum, probably as much as Hinkley could have made in a year.

Hinkley took it, held his torch up to see what it was; then, in the same old crabbed way of his, opened the fire-box door and dropped it into the fire with the remark:

"You're losing time talking to me here. I'd do that much for the dirtiest hobo on the pike. If you get home in time to see her, I'll consider myself well paid."

In the next instalment the hero of Arizona's In and Out System tries to break away from the game.

Recent Railroad Patents.

BY FORREST G. SMITH.

Improvement in Pay-As-You-Enter Cars—Strengthening Air Hose Without Adding Rigidity—A Turntable Worked by the Locomotive—A Switch that Will Not Move by Accident—A New Brake-Setter—Ventilation for Closed Cars—Protection From Trolley Wires—Vestibule Comfort for Motormen.

NEW PLATFORM BARRIER.

Improvement to Facilitate Entry and Exit In Pay-As-You-Enter Cars.

NUMEROUS improvements are being made in the construction of the entrance-ways to pay-as-you-enter cars. Among those worthy of mention is one covered by patent No. 931,724, August 24, 1909, issued to Charles O. Birney, of St. Louis, Missouri. At terminals, and at other points where it is necessary to discharge a number of passengers in a short time, the present form of car of this style presents a disadvantage for the reason that but one person can leave the car at a time.

It is true that all of the exits can be thrown open, but it frequently happens that persons are standing on the platforms or wish to enter while others are leaving the car.

Ordinarily, a barrier divides both doorways of the car, but in the patent referred to a barrier of such construction is provided that the entire door-way at each end of the car may be cleared for the exit of passengers. In carrying out the invention, a post is mounted about the middle of each platform, and the barrier which takes the place of the ordinary one now in use, is mounted upon this post in such a way that it may be swung to extend midway of the door-way, or to establish a passage-way from the door-way to the steps.

In other words, the barrier may be moved to divide the door-way into an entrance passage, and an exit passage, or to clear the entire way for entrance or exit alone. The conductor or motorman remains in the same position in either instance, and he has control over means which is provided for locking the barrier in either position.

TO STRENGTHEN AIR HOSE.

A Simple Device for Taking the Strain Off the Air Pipe and Leaving It Flexible.

WHILE air-pipe hose for conducting air from one car of a train to another is constructed in a substantial manner, the strain to which such hose is subjected frequently results in it being broken or torn so as to render it useless. It is true that such hose is often wrapped with flexible metal sheathing, but this renders the hose less pliable, and so is undesirable.

Emil Witzenmann, of Pforzheim, Germany, has secured a patent, No. 933,516, September 7, 1909, on a construction of hose for this use which is as pliable as non-reenforced rubber hose, but still is so strengthened that it may be subjected to extraordinary strain without any possibility of injury.

In carrying out the invention, lengths of ordinary hose are employed, and in the coupling sleeve at the ends of each length is arranged a perforated disk to which is secured one end of a flexible chain or wire. This chain or wire is of less length than the hose through which it passes, so that should strain be placed upon the hose tending to stretch it, such strain will be borne solely by the length of chain or the like employed.

While the hose is thus relieved of all

strain, it may be doubled or otherwise flexed as readily as can the ordinary hose now employed for the purpose.

ENGINE TURNS ITSELF.

On this Turntable the Locomotive Supplies Steam to Attached Cylinders and Does the Work.

EVERY effort is now being made to do away with the old style of turntable, in which manual labor was the motive power, and a step toward this end is disclosed in a patent, No. 933,637, September 7, 1909, issued to Richard R. Farrell, of Sausilito, California.

Mr. Farrell thinks that the locomotive itself should perform this work of turning the table upon which it is standing, and he employs such simple means to accomplish this end that it is a wonder that others have not thought of it before. In connection with the ordinary turn-table he provides a large ratchet-like circular track which extends around the turn-table and then mounts upon the table, at opposite points, steam cylinders, in which work pistons, carrying toothed projection which engage with the track.

Supply pipes lead to each of the cylinders by way of a valve chest, and when an engine has been run onto the table, a branch leading from these pipes is connected to a coupling for supplying steam from the boiler. Steam is thus admitted to the cylinders, and the pistons are set in motion, thereby forcing their toothed projections against the teeth of the track and rotating the table. The entire device can be worked from the engine-cab after the connection has been made, and the table may be stopped at any point.

A SECURE SWITCH.

By Means of a Leaf Spring the Point Is Prevented from Having Any Play Not Imparted.

QUITE a novel, and at the same time entirely practical switch-point-locking means is disclosed in a patent, No. 933,040, August 31, 1909, issued to John H. Laney, of Minneapolis, Minnesota. The object of the device is to lock a switch-point, not permanently, but against accidental displacement, at either limit of its movement.

In appearance, the switch is like the ordinary ones now in use, it consisting of the ordinary body having the main and side track rail sections formed or fixed thereon, but in the underside of the switch-point there is formed a recess which is shaped something like a football, except that the ends of the recess are more sharply pointed. In this recess is disposed a stout leaf-spring, which at its ends seats in the acute ends of the recess.

The body upon which the switch-point is mounted to swing is formed with an upstanding abutment, such as a pin which engages with the spring at a point midway of its ends. When the switch-point is in main-track position, the spring is bowed in one direction, and when the switch-point is moved to side-track position, it is bowed in an opposite direction, so that no matter which position the switch-point may assume, the spring will hold it firmly in place until its position is changed.

It is to be understood, of course, that, as the switch-point is moved from main to side track position, or vice versa, the spring is first straightened and then bowed in an opposite direction.

NEW BRAKE-SETTER.

Contrivance for Tripping Valve-Stems Without Destroying the Valves by Its Force.

NUMEROUS devices have been patented for automatically stopping a train should any car thereof become derailed, but such devices have usually included in their structure trip devices, which are directly connected with valves for setting the brakes. These trip devices are designed usually to come into contact with either the rails or the ties, and the shock incident to contact is often so severe as to completely destroy the valve.

A device which will accomplish the same results, but will obviate this disadvantage is shown in a patent, No. 932,675, August 31, 1909, issued to John L. Bering, of Gainesville, Texas. In carrying out his invention, Mr. Bering mounts beneath the trucks of each car of a train, brackets, in which are journaled long slender rollers at the inner end of the spindle, on each of which is a crank which rotates in the path of a valve-stem for applying the brakes throughout the entire train.

Normally, these rollers are above and out of contact with the rails, but should a car of the train become derailed, they come into contact with the rails and are rotated so as to bring the cranks into engagement with the valve-stems, thereby stopping the train. The rollers are mounted in such a

substantial manner, and their cranks have such a slight engagement with the valve-stems that no injury to the valves can result.

VENTILATING CARS.

An Exhaust Method for Drawing Foul Air from Closed Pay-As-You-Enter Cars.

NOW that pay-as-you-enter cars have come into general use, it is necessary that some means be provided for effectually ventilating the cars in the warmer months, as the circulation of air is not as great as in the ordinary open car. To attain this result, Dwight I. Cooke, of Chicago, Illinois, has devised a ventilating system which should prove acceptable, especially in view of the fact that the passengers of the car are not subjected to drafts.

The system devised by Mr. Cooke is designed chiefly to draw the foul air, collecting near the floor, from the car, and consists of a suction fan, driven by an electric motor, which is mounted upon the roof of one platform of the car, and controlled by a switch above the head of the motorman.

Leading to this fan, or rather the casing in which it is mounted, are branches from a conduit which extends the entire length of the car beneath the roof thereof. From this conduit other branches lead to registers beneath the seats of the car, so that the foul air is drawn from the car and fresh air may enter at such points, such as the windows, as the passengers may desire.

PROTECTION FROM WIRES.

A Trolley-Wire Hanger Which Breaks the Circuit When a Wire Falls.

WHERE overhead trolleys are used, there is a constant source of danger from broken trolley-wires which are liable to come in contact with pedestrians. A novel form of hanger for such wires is shown in patent, No. 931,771, August 31, 1909, issued to Charles A. Kraynik, of Racine, Wisconsin, which overcomes this danger, and renders the overhead trolley entirely safe for street use.

This hanger consists of a body portion which has brackets projecting therefrom, and in each of the brackets there is pivoted a trolley-wire gripping member or hanger section. These sections each have an upstanding arm, the upper end of which contacts with a conductor plug which is arranged in the body portion of the hanger.

The trolley-wire, supported by the hanger, is in a number of lengths, the ends of which are secured in the wire-gripping sections of the hanger, and the circuit through the wire is established by way of the conductor plugs referred to.

Normally, each section of the wire is in circuit with every other section, but should any one section become broken, the hanger sections, by which it was supported, will swing down on their pivots, thereby bringing their upper ends out of contact with the conductor plug and breaking the circuit.

VESTIBULE COMFORT.

Simple Device To Enable Motorman To Keep His Windows Ice and Snow Free.

QUITE a number of devices have been patented designed to clean the snow and ice from the window-panes in front of the motorman of a trolley-car, but nearly all of such devices embody chains, cords, or other devices which are liable to get out of order, and require frequent repair; also they are usually operated through the medium of cranks, or similar means of a complicated nature.

A very simple and inexpensive device for this purpose is shown in patent No. 932,051, August 24, 1909, issued to Garnet W. McKee, of Chicago, Illinois. Instead of employing gears, or like complicated means for the purpose, Mr. McKee provides a long, slender air cylinder which is mounted in front of the dashboard of the car, and in which works a piston, carrying at its upper end a wiper of any suitable nature, which is normally in position against the lower part of the window-pane directly in front of the motorman.

The cylinder has connection with the ordinary air-brake pressure supply for the car, and by turning a valve the motorman may cause the piston to rise, thereby moving the wiper upward across the window-pane, and removing the snow or ice collected thereon.

A full dinner-pail is a fine mascot.—The Roundhouse Foreman.

LOVE-SONG OF THE RAIL.

BY GEORGE FOXHALL.

Written for "The Railroad Man's Magazine."

SOFT lines of light through the autumn evening,
Paths of silver, all gloom-caressed;
I, who have always loved your brightness—
Shall I tell when I love you best?

Patient and steady 'mid hurrying motion,
Bearing a world on a world-wide quest;
Unmoved servant of man's mad speeding,
Would you know when I love you best?

Not in the world-wide quest, unending;
Not when your unreeled miles I roam;
Paths of silver, soft gloom-enfolded,
I love you best—when you bear me home.

Seraphim swords pointing into the gloaming,
Moonbeam ribbons by elfs unrolled;
Fairy-touched by your magic mission,
Silver lane to a heart of gold!

Fain would I tell you of your high service;
Star-bright trail over which I go;
But a thousand may tell and a million listen,
Yet, fairy path, but two can know.

THE TEN-THIRTY CALL.

BY PERCY WILSON.

Pie and Platitudes Almost Prevent the Call-Boy from Getting Burnside's Signature.

SNAPPER was looking over the yardmaster's shoulder when the operator handed the latter the order for an extra. As was not unusual with him on very slight provocation, the yardmaster immediately "went off the iron." "Where's that call-boy?" he demanded. "What's become of that red-head? Where is— Oh!" as he turned his head and came afoul of Snapper's smirking countenance, "here you are!"

"Yes, here I are!" mocked Snapper. "Go on, go on—say what you were going to. Don't mind me! Where did you expect to find me—in your lap?" The call-boy was aggrieved.

"What's the earliest you can call this extra for?" was the brisk query. "Ten-thirty?"

With an exasperating affectation of indifference, Snapper let his eye wander to the clock, gaped a minute over the crew-board, and gradually came around to the book. "I reckon," he answered. Then, with sudden interest: "Who's to shovel smoke?"

"Oh, you take notice, do you? Now, that's what I want to impress on you. Listen."

"'Laying a hand to his ear,'" quoted Snapper from a favorite author, and suiting action to the speech, "'he gave close heed to the fiendish disclosure.' Go on."

The yardmaster was too accustomed to these burlesques to honor them with any attention. "Go for Burnside," he directed.

"He was let off."

"I know that. Pay attention. He was to be off until midnight, unless we should need him in some emergency this morning; and this is the emergency. He promised to stay at home till nine o'clock, and not to leave town before ten." He glanced at the clock. "It's only eight-fifty-eight now. You ought to find him easily," winking to the operator.

"Sure!" returned Snapper. "If only I hadn't bent one of me wings! What was it the coal-heaver wanted off for, anyway?"

"To rob a bank, maybe. Don't bother me; but go get him."

"Put his name down," said Snapper in disgust. "I'll get him."

The yardmaster entered the name and handed the call-book over. "Now, hustle," he directed.

Snapper thrust the book in his pocket and struck an attitude. "Beware, James Burnside!" he declaimed. "Your doom is knelled, and the avenger—"

The avenger was the yardmaster, and Snapper got through the doorway just in time to escape his foot.

"Hang that kid!" laughed the yard-master. "He gets on my nerves, with his spouting and fool antics. But he's a good caller," he observed to the operator; "and, mind my word, he'll come back here with Burnside's signature in his book. Heaven knows where he'll find him, though, for Jim's tricky, and he'll dodge if he can. He did beg hard to be off."

In spite of his unhesitating assertion, the call-boy had very grave doubts about getting Burnside. The promise to remain at his boarding-place for a call till nine o'clock made it unlikely that he would be there one minute later, while the additional hour did not give much time for finding him in a town of fifteen thousand people. What Snapper most desired to know was, where was he intending to go at ten? He had a suspicion that it had something to do with Kitty Carnigan.

It was well known among the fireman's acquaintances that he was much enamored of this black-eyed young lady, and, taking into consideration the hours he wanted leave, from ten in the morning until midnight, Snapper at once decided that a knowledge of Miss Carnigan's plans for the day would be very helpful.

Being too wise, however, to attempt to get this from the young lady herself, as soon as he had called those two of the crew who lived most convenient, he moved directly on the engineer, whom, in the usual order of convenience for himself, he would otherwise have called last of all. His information came without his asking it.

"Who's to fire for me this trip?" the engineer inquired as he took the book.

"Can't you see?" said Snapper, laying a finger on the name.

"Ho!" laughed the engineer, "you'll not get Burnside. He's going out to Maple Park on the ten o'clock car with his girl and her folks to a basket-picnic. He's keeping an eye peeled for you."

Snapper restrained himself. "It would be a shame for him to miss seeing me," he retorted. "I'll go out and let him have a look before he goes."

With joy in his heart, Snapper went on. Calling a fireman for the ten-thirty extra was merely a matter of business. Snatching Burnside from a contemplated day's happiness with his lady-love would make it a genuine pleasure. It would square up a debt, too; for when he had been surreptitiously "resting his eyes" on a bench in the roundhouse some time before this, Burnside had taken the opportunity to lampblack his face, and Snapper had wandered around an hour before discovering it. "Reveng-g-ge!" he muttered as he hurried to the northern edge of town.

Back of the row of houses, of which the Carnigan home was one, lay an open meadow stretching to adjoining fields, and on each side to partly graded streets. At the end of the street to the east stood the domicile of Mrs. Cort, where Burnside and several others of the railroad men boarded.

From here a path led through the meadow, across a little stream lined with briers and alders, along the rear of the row of houses, and then to the street through an open corner lot. It made a short cut from the boarding-house into town, and was particularly in favor with Mr. Burnside for the opportunities it gave him in passing back and forth to drop in for a word or two with Miss Kitty.

Allowing for the possibility of Burnside staying overtime at the boarding-house to make an extended toilet, Snapper went there first, only to find his room empty. Mrs. Cort could give no information. There was little hope of catching him at Carnigan's, for whichever way the house might be approached, there was probably a close watch kept if Burnside was there, and he would get away unseen in the opposite direction.

To lie in wait and take him from his inamorata as they were starting for the car would have suited the call-boy's dramatic longings most, but it was not an impossibility that the fireman had already forestalled this by an arrangement to meet the party somewhere along the line.

In this uncertainty the immediate thing to be done was to get on his quarry's trail. Snapper gritted his teeth and struck across the meadow. At the farther side of the run he stopped and,

on a sudden thought, got down and examined both ends of the short plank that spanned it. Without doing anything more, however, he got up again and went on, and soon entered the Carnigan's rear gate. He had kept his eye sharply on the kitchen window, and flattered himself that he had stolen up unnoticed; yet, when he stopped at the kitchen door, Miss Carnigan seemed not surprised to see him.

There was something suspicious in this. To his inquiry she replied that Mr. Burnside had been there that morning, but had gone into town. Was he wanted?

Oh, no, he wasn't wanted. Snapper had merely noted that he had been looking poorly of late, and stopped to inquire about his health. "Gwan!" said Snapper, and hurried to the front gate.

He sprinted to the corner just in time to see the fireman turn to the right a block ahead. On an easy trot the call-boy followed after.

To his surprise, when he reached the turn he was still nearly a block in the rear, and Burnside was not running, but only walking fast. Snapper let himself out several notches more and put on a full head of steam, only to find when he came to this last corner that the fireman had completely disappeared. Lounging on a step near by, however, was one of Burnside's friends, and Snapper slackened up for information.

"Burnside?" said the man. "Yep; just passed here with throttle wide open and both pops up. Hit the curve and shot up that first alley"—pointing—"and he was going some. Why, I'll bet he was half-way up the side of that house when he made the turn, and I reckon you'll find his footmarks on the wall.

"He called to me to tell you to hurry up, kid," he said with a grin; "and you want to move lively, or he'll lose you."

Snapper knew this was all gammon. He glanced at his watch. It was almost nine-thirty.

"I'll look for those footmarks some other time," he remarked dryly; "I'm in a hurry now," and he started off afresh at a jog-trot in the direction that had been indicated.

It was evident that Burnside had gone into hiding some place soon after turning the corner; and there being still time for him to get back to Carnigan's and help the party with their baskets to the car, Snapper wanted to give him every encouragement toward doing it. As for himself, as soon as he was safely out of sight he put on extra speed back toward the meadow.

Once there, he hastened across to the little creek and, unseating the farther end of the plank, dug some of the dirt from beneath it and set it up again, but resting now on a pointed stone. When he had tested it to his satisfaction, he crossed carefully back and, under cover of the bushes, made his way along to the street. Almost as he peered out he saw the fireman come warily from the corner ahead and enter the Carnigan gate.

"It seems almost a shame to do it," commented the call-boy with a grin. "He acts so nice about it."

Having no longer any necessity for concealment, Snapper got up on the sidewalk and walked on toward the house, whistling cheerfully.

"There's that long-legged kid again!" ejaculated Burnside. "If he comes back here to the kitchen, I'll slip out the front door and join you on the car somewhere. If he comes to the front, keep him till I can get to the other side of the run; and after he's gone, I'll come around by the street."

Snapper's schedule took him to the front door. There was no answer to his first ring, so he rang again; and shortly Miss Carnigan answered.

"Oh! it's you, is it?" was her tart greeting. "What do you want now? It's a pity you couldn't have come around to the kitchen door."

"That's the fault of me tender heart, Kitty," returned the unabashed Snapper. "I want Jimmy Burnside, and I couldn't bear to break it to him sudden. You tell him."

"Didn't I tell you he had left here?"

"Aw, quit it, Kitty! Ain't he going on the picnic with you? Sure!"

"Well," was the admission, "he came back after you left, but he's gone again. You might find him at his boarding-house."

Snapper struggled to keep a straight face.

"I've been there once," he returned; "and the book of rules says"—he held his call-book close to his nose and thumbed over some blank pages—"it says, here: 'Rule 106—In all cases of doubt or uncertainty, see for yourself.' I've got to do it, Kitty," and he pushed past into the house.

"Oh, very well!" retorted the young lady, and followed through to where her mother and a younger sister were finishing the packing of the picnic-baskets in the kitchen. "Now! are you satisfied?"

Snapper made no reply. Something of more immediate interest absorbed all his faculties, for his eyes had lighted on the top layer in one of the baskets. "Are those some of your own pies, Mrs. Carnigan?" he inquired in awed tones.

"Sure!" was the answer. "Whose would they be?"

"But, some that you baked yourself?" he persisted with an air of strong disbelief.

"Of coorse!"

"Mrs. Carnigan"—he wanted a calm, judicial answer to this question—"are your pies as good as they used to be?"

"Well, I never!" cried Mrs. Carnigan, flinging up her hands. "If you ain't the blarneyer!"

Snapper was not a beauty. He was still growing; his joints were too loose, his feet too big, his clothes too small; yet when he opened his mouth to take in the piece of pie that was immediately cut for him, expanding until his freckles ran together and his whole countenance resembled nothing so much as a wedge disappearing through a large, rusty washer, he became for the moment a sight that gave true joy to Mrs. Carnigan's domestic heart.

"That certainly was good," he murmured in heartfelt commendation as he swallowed the last of it. Then he met Miss Carnigan's anxious eye and gave a sudden impish start. "Gee. Kitty!" he exclaimed. "Some one's fell in the creek."

Kitty jumped. "Nonsense!" she retorted. "You couldn't hear that from here."

"No," admitted Snapper. Then, with a prodigious wink: "But I bet it's happened, just the same." And, darting out the door, he ran back through the yard.

Stopping at the creek merely long enough to pull the plank out of the water and set it roughly in place, he hastened to the boarding-house and went softly up to the fireman's room. He snickered to himself at hearing Burnside muttering objurgations inside and thrashing wet clothes about.

He tried to peek through the keyhole, but the key was in it. He felt sure the door was locked, and he was afraid to try it for fear his quarry might take warning and even yet escape by going out the window and down over a convenient shed-roof.

In this dilemma the pie furnished him a hint, for, as it sought a cozy corner of his anatomy in which to dispose itself comfortably, it gave him a gentle internal tweak. In an instant he had doubled up as though taken with a violent cramp and, falling against the door with a horrible groan, seized the knob.

The door was locked, but as he sank on down to the floor he kept up a piteous moaning. In another moment the door opened and he fell half inside.

"You—" began the fireman, then lost speech.

"Aw! sign the book," said Snapper, thrusting it at him. "And be quick about it, too," he added sternly. "I can't be fooling all my time on you."

Burnside mechanically signed.

"I hated to wet you up, Jimmy," said Snapper as he took back the book, "but—"

He slammed the door and raced down the stairs from the irate fireman.

A flimsy order will lay out a flier, but it's better than a wreck for the purpose. Contempt is usually misplaced.

—The Chief Despatsher.

Riding the Rail from Coast to Coast.

BY GILSON WILLETS,

Special Traveling Correspondent of "The Railroad Man's Magazine."

SOUTHERN California was good to Mr. Willets. The railroad men in that part of the country gave him as good a bunch of yarns as he has picked up anywhere on his interesting journey. They are those fascinating, gripping yarns that only railroad men can tell. And every-man—we don't care if he is a pinhead, a tallow-pot, a stinger, or a ham, or even if he has never seen a railroad—will want to read them.

No. 10.—ROMANCES OF THE GOLDEN STATE.

Steeper than Pike's Peak—Rufus Haines's Potato Thief—Jim Fisher's Lone Cotton Crop—The "Honeymoon Special"—Jim Leonard's Last Letter—and Others.

"BUT, then, this sort of mountain railroading is not wholly a matter of courage; it's largely a matter of stomach. I've seen passengers in this car close their eyes in sheer physical fear and grow white around the gills with fright. Yet they were safer than riding in the elevator at the Alexandria Hotel over at Los Angeles.

"Why, I've seen business men from the East back down at the first sight of these tracks. I've seen them arrive at the lower terminus of this road, take one look up at the tracks, and then beat it back to Los Angeles or Pasadena, vowing never again even to think of climbing any mountain by rail.

"Those men were courageous-looking enough, but what they lacked was stomach."

The speaker was the engineer, brakeman, conductor, trainmaster, despatcher, track-walker, section foreman, road-master, general manager, and acting general superintendent of one of the most remarkable railways in America. It was the Incline Railway of Mount Lowe, California, within a short trolley ride of Los Angeles.

The incline was steeper than the one at Mount Washington, steeper than the one at Pike's Peak, steeper than the one up the Rigi. In eight minutes you made a rise of fourteen hundred feet on a grade of sixty per cent.

The car in which we made the ascent was called the "White Chariot." Its construction was adapted to carrying thirty passengers up an incline that came mighty near being a perpendicular. It had three compartments of two seats each, with each compartment on a different floor level, and could be compared to nothing better than a steep

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front stoop of three huge steps. To this car falls the honor of making the steepest ascent and descent in the world.

It's Perfectly Safe.

"Safe!" continued the road's Pooh Bah. "I should say we are safe. We've been running for sixteen years, and never hurt so much as a passenger's finger-nail. The power that hauls us up is furnished by electricity from a plant down in Altadena, at the foot of the mountain. You notice that endless wire cable to which we are attached? Well, it's one and a half inches, and it's regularly tested to carry a hundred tons.

"At the top is the heaviest mountain-hauling machinery you ever clapped eyes on—with a prodigious cogwheel embedded in solid granite. With the least derangement of machinery, we'd stop and hold fast, and all hands would be as safe as on the level.

"Yet, I don't guess but what we're as near as we can get to being an elevator and still run on tracks. Watch what a neat job we'll make of passing yonder descending car."

We were half-way up, had covered fifteen hundred feet of track, and had risen seven hundred feet. Right there we made an automatic "turn out" to let the descending car pass, for there were two "White Chariots," and every time one arrived at the top of the mountain, the other arrived at the foot.

Just Like Ballooning.

"It's like rising in a balloon," I said.

"You've hit it right," said Mr. Pooh Bah. "And when you reach the top, you've ballooned to a point as high up as Vesuvius. We're a declivity, all right. I've heard folks who came direct from travel in Switzerland board us and cry out: 'The Swiss Alps were never like this!'

"Why, look at that view! You're taking in a panorama of geography of about seventy-five to a hundred square miles. There's the Pacific Ocean over there—and Catalina Island far out at sea. And there's San Pedro, and Long Beach, and Venice, and Santa Monica. And look at that San Gabriel Valley! Looks like a checker-board, doesn't it, with its orange-groves and vineyards? And Los Angeles looks like a mere village, eh?

"We owe the whole business to the man after whom this mountain is named—Professor T. S. C. Lowe. He solved all the engineering difficulties—got rich men to back him and form a stock company."

Here the car came to a stop, and Mr. Pooh Bah, turning to the passengers, said: "This is as far as we go, ladies and gentlemen. Yonder car will wind you up the mountain another fifteen hundred feet to the Alpine Tavern. Give my regards to my friend, Mr. Deering."

The Cotton Broker's Yarn.

"Who's he?" I asked bluntly.

"Mr. Deering? Oh, he's a cotton broker from Memphis, Tennessee. He's chock-full of yarns of California—yarns that we native sons never heard tell of before. And he's the jolliest man I've ever met on this railroad—I mean the jolliest, *excepting* one who was a railroad telegrapher."

Hearing this, I pricked up my ears. "Railroad telegrapher, you say? Who was he?"

"Say, you just ask anybody in Los Angeles about Rufus Haines. He died the other day, aged eighty-two. Yet, up to the day of his death, he was as hale as you or I. He was strong enough to vote for Taft on Election Day—and a few hours later he sank into the long sleep. He used to love to come up this mountain. How he did enjoy himself up here, where he said he could get the proper perspective on life.

"He came from Bath, Maine, where he first learned telegraphy. He came to California as a pioneer long before we ran the first railroad through this valley—the Los Angeles and San Gabriel Valley Railroad, that was. And when the railroad came, he worked on it as an operator—and the other day the biggest bunch of railroad telegraphers ever seen in one house at one time hereabouts gathered at his bier.

"Yes, Rufus Haines was a pioneer.

He came to California in the time of the Vigilantes. Well, so long!"

"Just one moment, Mr. Pooh Bah," I said. "Didn't Rufus Haines ever tell you something in particular about the Vigilantes?"

"I should say he did—often. He told me the story of Tom Tanner. Tom Tanner, you see, was one of those rogues that the Vigilantes put to death for stealing. It was at Marysville, California—that town having its Committee of Twenty-Five.

"Rufus Haines told me how, one night, he was in Marysville when the fire-bell was given a terrible ring. Haines said that it rang altogether too vigorously and persistently for a mere fire. Haines sprang out of bed to see what the rumpus was about, and this is what he learned:

"First of all, with the ringing of the bell, the members of the Committee of Twenty-Five jumped from between sheets and assembled to find that the midnight call was to the release, on bail, of a man who had been captured in the act of stealing a sack of potatoes. That was Tom Tanner.

"Tanner's house had been searched previously by some of the committee, and great quantities of stolen merchan-

"YOU'VE BALLOONED TO A POINT AS HIGH UP AS VESUVIUS."

dise unearthed. And now he was caught red-handed swiping a sack of potatoes. Tanner was taken before a judge named Wilkins, who let him go on a two-thousand-dollar bond. This act of the judge displeased the Vigilantes. Justice was deemed not swift enough. Indignation spread among the townspeople—and they rang the fire-bell, calling out the committee members.

"All night they searched for Tanner. In the early morning they caught him trying to escape from town. They caught him in the act of throwing something into a stream — a buckskin bag, containing four gold watches.

Tanner Gets His.

"Those gold watches shortened Tanner's life by some years. The Vigilantes had intended only to put him back in jail, and compel Judge Wilkins to keep him there by canceling his bail bond. But the gold watches — that settled it. The Vigilantes determined to hold Tanner as their own prisoner and try him themselves.

"The committee formed itself into a court. Within fifteen minutes the president of the committee, who had acted as judge, came out and reported to the great crowd that had assembled in front of committee headquarters, that Tanner had been found guilty of grand larceny.

"'Hang him!' shrieked the crowd. And it was never recorded, Haines told me, as a lynching, for the Vigilantes commanded Sheriff Gray to do the job.

"Meantime the thief's wife, with her two children, passed through the crowd, pleading piteously for mercy for her husband, all in vain.

"That was not all. Haines said that the Vigilantes sometimes dealt out justice to bad men thus swiftly, yet vengeance did not end even with death. In Tanner's case, the Vigilantes drew up a petition and got the mayor of Marysville to refuse to allow the body of Tanner to be buried in the cemetery. As a result, all that was left of the thief was given to earth in a lonely spot outside the town limits.

"Nor was that all. Body-snatchers, that very night, stole up on their awful errand—only to sneak away when they saw the widow of Tanner standing guard at the grave.

"Next morning, the widow had the body brought to her home and interred in her back yard, where she watched it night after night for weeks.

"Well, so long! Remember me to Mr. Deering."

I now began the tortuous rail journey up to the Alpine Tavern. Around curves and along fearsome precipices the car wound its way—it was an overhead trolley, by the way—and sometimes as many as four levels of the railway could be seen at once.

Arrived at Alpine Tavern, I found it standing in snow, though I was barely an hour from the flower-beds of the valley. In the log hotel, I pulled a rocking-chair up to the log fire on the hearth, and, while warming my feet, read this sign over the fireplace:

> Ye Ornament of a House Is Ye Guest Who Doth Frequent It.

"A new ornament has arrived, I see," said a voice behind me. I turned and beheld a man wearing miner's boots, polo riding-breeches, a corduroy hunting-coat, a red sweater, and a golf cap.

"My name's Deering," said he. "Memphis is my home town. I'm in cotton. What's your line?"

"Railroads. Glad to know you, Mr. Deering. That Pooh Bah, on the slight declivity one must hazard to get here, wishes particularly to be remembered to you."

California's Only Cotton Crop.

"Bully for him!" cried Deering. "Did he tell you that story I told him of the first and only and last cotton crop ever raised in California?"

"No! Wasn't aware they had ever raised so much as a spool of cotton in this State."

"Wasn't aware? Let me put you wise. You're in railroads, you say. Well, you ask the Santa Fe and the Espee how they once heralded to the people that they were preparing to haul a California cotton crop to a waiting

world. Those railroads informed the whole country that a cotton crop covering six hundred and forty acres was about to be hauled by them, and that within a year or so they'd be hauling cotton from six thousand acres.

"Those cotton acres were down Bakersfield way, on the Kern River. The cotton was there—yes, it was all there; and so were the cars there, ready to move it. But the cotton stayed right where it grew.

Fisher Gets on the Job.

"The man responsible for that lone cotton crop of California was Jim Fisher. Jim was a partner of Haggin, the California mine-owner and horse-racer. Fisher himself had his own barrel of money, and he raised the cotton on his own hook, too—it weren't none of Haggin's affair. If he'd had a partner, he would not have dared to do what he did to that cotton, and I would not have had this yarn to spin.

"Jim Fisher tapped the Kern River, much to the chagrin of agriculturists down the valley. He built a big canal and a lot of little canals, and he called the same an irrigation plat. When he got square miles upon square miles ready for business, he got a bug in his head. His bug was cotton.

"'Why should not California be a cotton State?' he asked himself. And in the course of his dream he went to the railroads and told them what he contemplated doing. Could the railroads move his cotton at a figure that would leave him a margin of profit? You bet the railroads could do that—and so Jim Fisher went to work.

"He planted cotton on six hundred and forty acres. He built a house for himself right where he could sit and watch that cotton grow. And, it's a fact, the cotton grew. It quickly came to a head.

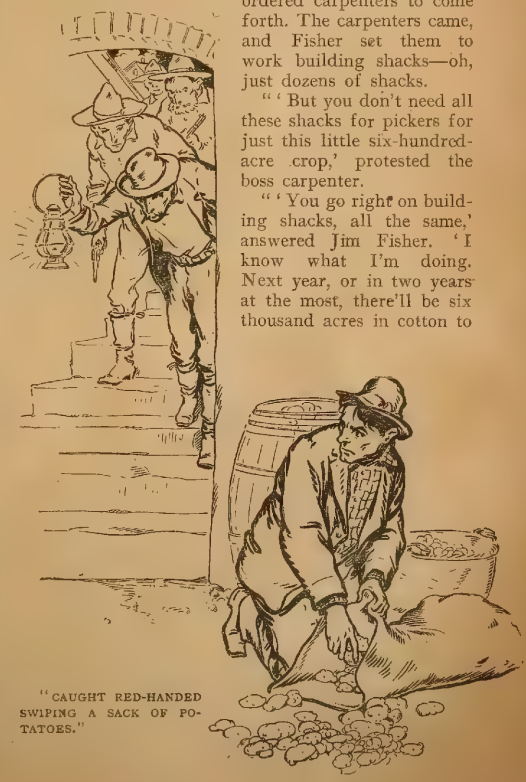
Jim Fisher had started the thing as an experiment. But here it was realized. He rubbed his eyes — but there was the cotton growing and growing and getting to the puff-ball point whereat it had to be picked P. D. Q., or the winds of heaven would carry it away.

Then Jim Fisher saw that he had to get right on the job.

"'Got to provide for some one to pick it,' quoth Fisher. He sent to Bakersfield and Fresno and Los Angeles and a heap of other places, and ordered carpenters to come forth. The carpenters came, and Fisher set them to work building shacks—oh, just dozens of shacks.

"'But you don't need all these shacks for pickers for just this little six-hundred-acre crop,' protested the boss carpenter.

"'You go right on building shacks, all the same,' answered Jim Fisher. 'I know what I'm doing. Next year, or in two years at the most, there'll be six thousand acres in cotton to



"CAUGHT RED-HANDED SWIPING A SACK OF POTATOES."

be picked, and I'll need the shacks to house the pickers.'

"Meantime the railroad traffic men and the industrial men of the lines came down to Fisher's irrigation plat, and at sight of the cotton their eyes bulged out of their astonished heads. They went back to Frisco, and wherever else they came from, and spread the glad tidings about unionizing those cotton-pickers. He said to them:

"'This here cotton of Fisher's simply has to be picked—now or never. He can't get other pickers here in time to do the job; he's simply got to leave the job to us fellers on the spot. See? Well, to-morrow mornin' we'll ask for six dollars a day. See?'

"YOU BOYS BEEN SITTIN' UP ALL NIGHT RAISING THE PAY-RATE, HAVE YOU?"

broadcast. Cotton in California! The thing seemed a miracle, with Jim Fisher as the magician.

Three Dollars a Day.

"'I want cotton-pickers,' now said Jim Fisher to the railroad passenger departments. 'Please get 'em for me—get a regiment of them. My cotton has to be picked within a week.'

"Forthwith into that irrigated section poured cotton-pickers. They asked three dollars a day and 'found,' and Fisher gave them all they asked. He installed them in the shacks; he fed them right smart. One Sunday night he said to them: 'To-morrow, boys, we'll begin picking.'

"That night the 'boys' put their heads together, under the leadership of a foreman from the South, who must have been at some time in his life a very jim-dandy of a labor leader. He was an organizer, he was. He knew how to go

"Monday morning came, and there was Jim Fisher on the field bright and early, ready to direct the picking operations. Just as the sun rose that foreman went to Fisher, backed up by a timorous committee and says:

"'Mr. Fisher, we-all reckon that our labor's worth six dollars a day.'

They Raise the Ante.

"Now, Fisher was one of those men who always had a cigar in his mouth. He blew out clouds of smoke, took his cigar out of his mouth, scrutinized its burning end closely, put it back between his teeth, then said, very quietly:

"'You boys been sittin' up all night raising the pay-rate, have you?'

"'Yes, Mr. Fisher, the price of labor on the cotton-fields of California has riz.'

"'And have you boys considered the fact that six dollars a day eats up my profits on this crop?'

"'Don't know nothing about that, Mr. Fisher. Just know that six dollars is about our size.'

"'You do, do you? In that case the crop is worthless.'

"And—what do you think Jim Fisher did? He turned to where he could face his broad acres of growing cotton, took his cigar from his teeth, flicked the ash from it, touched its lighted end to the nearest cotton-puff.

"The puff blazed instantly, and the fire was carried to other cotton-bolls. In a jiffy there was a sizzling and crackling such as you can hear only in a burning cotton-patch.

A Vanishing Dream.

"You bet the foreman was frightened. With a shout he ordered his men to jump in and beat out the blaze, for now they stood to lose even their three dollars a day.

"'Stand back!' shouted Jim Fisher, drawing a gun. 'This is my cotton, and I'll shoot the first man that lays hand or foot on my property!'

"By nightfall the whole six hundred acres had become a blackened smear on the landscape. All day long Jim Fisher sat on his porch watching his dream go up in smoke. The wires ticked the news. In the railroad offices throughout southern California there was weeping and profanity."

Here's a tale that might be entitled "The Adventures of the Paymaster's Roll." I was "seeking my prey" in the Espee yards hard by the Arcade Station, Los Angeles, when one of the yardmen said: "The signal is set for the Honeymoon. She'll be here in a minute."

I asked him what he meant by "honeymoon," and he told me that the night-train from Frisco brought down so many newlyweds that it had been given the unofficial name of Honeymoon Limited. The train pulled in, and one of the sleepers was cut out, shunted to a far siding, and given over to the cleaners.

I stood watching the cleaning process as applied to that sleeper, when suddenly a porter leaped from the step and dashed up the yard, as if his very life depended upon his getting quickly away from that vicinity.

About ten minutes later a well-dressed man came running up all out of breath and crying to the cleaners at the windows: "Is this that sleeper from the train from San Francisco?"

On being told that it was the car, the wild-eyed man asked: "And did you find anything under the pillow in lower five?"

"No, sir—we didn't. But the porter did."

"Porter? Where is he?"

"Don't know, sir. He's gone, ten minutes and more."

Here the worried-looking man turned to me, saying: "I lost my pocketbook in that car. Think I left it under my pillow in the berth. It contained a thousand in real money. Took a motor-car from the station to the Alexandria Hotel, only to find I hadn't money enough to pay the chauffeur. So I got the driver to run me back here as fast as the law would permit."

"I think you will find your wallet," I said, "if you will go to Pullman headquarters up the street. I saw a porter make a getaway from here a few minutes ago, and the chances are a million to one that he's gone to headquarters to turn in your wallet."

"Shore Enough" Dough.

"Do you really think so? I'll go there at once."

Twenty minutes later the porter returned to the car, smiling from ear to ear.

"Easy money, boss," he said, displaying a yellowback.

"Ah suspicioned that pocketbook contained shore enough real money, and ah ran mah legs off to get mahself exonerated at the Pullman office. Ah'm goin' to treat mahself to-day to the fines' chicken dinner Los Angeles can cook.

"That man is the paymaster of a navy ship, South Dakota. His name's Nicholson, and he rode with me last night from Frisco, on his weddin' trip. Twenty dollars! Don't you go foolin' yourselves," he added, turning to the cleaners, "that it don't pay in this business to be honest."

The Santa Fe station at Pasadena—thirty minutes from Los Angeles—stands

HIS LIFE DEPENDED ON HIS GETTING AWAY FROM THAT VICINITY.

picturesquely in the grounds of the Green Hotel. Just outside of the station there is an artistic summer-house, or outdoor waiting-place, with comfortable seats for waiting passengers. There, under the wide-spreading palms, in the velvety night characteristic of that semi-tropical land, I sat in company with one of the railroad watchmen, or depot policemen.

"It looks to me," he said, "like more soldiers of fortune come from the ranks of the railroad army than from any other calling. There was Jim Leonard, for instance. It was railroading that made him a soldier of fortune. He's somewhere in the China seas at this minute—a sailor before the mast of a tramp, a man without a country, without a port or a flag, just a human derelict with a price on his head.

A Soldier of Fortune.

"Now, the way we came to know of Jim Leonard's latest move was by a strange accident. We had given him up months ago as dead or lost, when, only the other day, a prospector, all dust from the desert, and all rags from encounters with mesquit, comes into Los Angeles on a Santa Fe train, displays a letter, and says:

"'That there is from a stranger to me, named Jim Leonard. I've carried it two thousand miles just out of brotherly love for one who, like myself, is a soldier of fortune.'

"To go back a little, I must tell you that Jimmy was known to a lot of folks in Los Angeles and Pasadena, for he'd been in this country for seven years. Last April he applied for a job as a policeman on the Los Angeles force, and was sworn in. By July, however, he got tired of walking a beat, and swore he would become a railroad man, so as to see something of the world. Well, he's seen a heap of the world, and I reckon he wishes he had stayed on the police force.

"Resigning his police job, he went to an employment agency in Los Angeles that was advertising for men to go to Mexico to work on the railroads there. He was promised a job as foreman of a section-gang of peons, if he would drop down to Guaymas.

Quits Being a Cop.

"According, he got a free ride to Guaymas—just what he was looking for. He was seeing the world. They were building a railroad down there, and Jimmy got the job, as promised. It was a good job, too, if only Jimmy had held on to it and had left the mescal alone on the Sabbath.

"The next thing we knew Jimmy was lodged in the Guaymas jail charged with murder; and then we heard no more from him, and gave him up for a goner.

"Months passed, and just the other day, as I've said, a miner comes into Los Angeles with a letter in Jimmy's

own hand. How that miner came by that letter beats all fiction. He found it in an old sack under a lot of rubbish, in a box car, on the railroad way down on the west coast.

"Jimmy himself had left the letter in that box car, in the bare hope that it would be found by an American, and somehow get to Los Angeles.

Jim's Last Letter.

"The miner was beating his way up to the Rio Grande; and as he had read enough of Jimmy's letter to get him into sympathy with Jimmy's plight, he hung on to the document till he delivered it to the man to whom it was addressed, in Los Angeles.

"You see, Jimmy had no money for a postage-stamp; and, besides, he would not dare trust that letter to the post-office in Mexico at just the time it was written, anyway.

"Well, I've seen the letter, and I know what it says. Jimmy tells how he came to be charged with murder. He had been celebrating the Sabbath in town, with overmuch mescal, and on the road back to camp he overtook a peon, who, he says, picked a quarrel with him, and attempted to draw a gun.

"Jimmy says that he shot the peon dead. He then went back to the railroad

"JIMMY SAYS THAT HE SHOT THE PEON DEAD."

camp, a decidedly sober man, and confessed to the superintendent, telling all that had happened. The superintendent told him that the safest thing for him to do would be to get out of the country. Jimmy hid in a box car, and got almost to the Rio Grande, when he was captured.

Stay in God's Country!

"They took him back to Guaymas and locked him in a filthy prison, where he was chained in his cell. Then they condemned him to serve a long term at the salt mines, which almost surely means death. While awaiting transportation to the mines, Jimmy, with the aid of some Mexican friends, managed to escape from jail. Again he hid in a box car, and he writes how he suffered cruelly from extreme heat and thirst and hunger.

"He tells, too, how his friends had arranged for him to ship before the mast on a tramp vessel from some port on the Mexico west coast; and how, if ever the letter reached Los Angeles, we'd know what had become of him, as the vessel was bound for the China seas. Jimmy assures us that he killed that peon in self-defense.

"But the part of Jimmy Leonard's letter that interested me most was where he spoke of leaving us to see the world. 'Railroading is all right,' he wrote, 'so long as you railroad in God's country. But don't any of you get the idea that you'll see a whole lot of the world through going to some other country to railroad. For you'll only see trouble and suffering like I have. If only I had stayed a policeman, with the job of hunting criminals, instead of being myself hunted at this moment, with a price on my head, and with no country and no flag, I would have remained a happy man. Tell all the railroad boys who knew me that I say to them: Stick to your job like the postage-stamp does, and don't think of going railroading anywhere else, for happiness is right in your own dooryard.'"

The Worst on Record.

When I reached the arroyo, I went to the foreman of the section there, and asked him if he remembered the terrible wreck on the night of May 21, 1907. I had been told of this particular wreck, and the ingenious and fiendish device by which it was accomplished, and I wanted to see with my own eyes just how that trap was sprung.

"Do I remember?" answered the foreman, one O'Mara. "I should say I do. I ought to know, because I was called out of my bed at one in the morning.

"It was the Espee's Coast Line Flier. One man was killed and twenty-two wounded, of whom three afterward died in hospital. In all my railroading days I have never seen such horror or such suffering, nor have I ever seen or heard of any trap for wrecking a train so diabolical as that we found had been sprung that night.

"Along comes the flier, three hours late. Janis was in the cab, and going like mad. It was pitch-dark, and how could he be expected to see a trap? Come out on the trestle, my boy, and I'll show you exactly where the trap was set."

When the Crash Came.

He led me out on the trestle over the Arroyo Seco, and pointed to a certain fish-plate. "Here," he said, "is the exact spot at which the engine ran off the rails, and here it is where the tender, the diner, the buffet-car, two Pullman sleepers, and the mail and express cars plunged off the trestle, and tumbled the sixteen feet to the bottom of the arroyo.

"Three of the cars were completely overturned—the buffet, the express-car, and one Pullman. All the other cars landed on their sides.

"By the time I got here, the cries of those pinioned under the wreckage and the moans of the wounded was something terrible. With axes we hewed away till we made holes in the cars for the passengers to climb out, I myself meanwhile helping women and children to climb out of windows and doors.

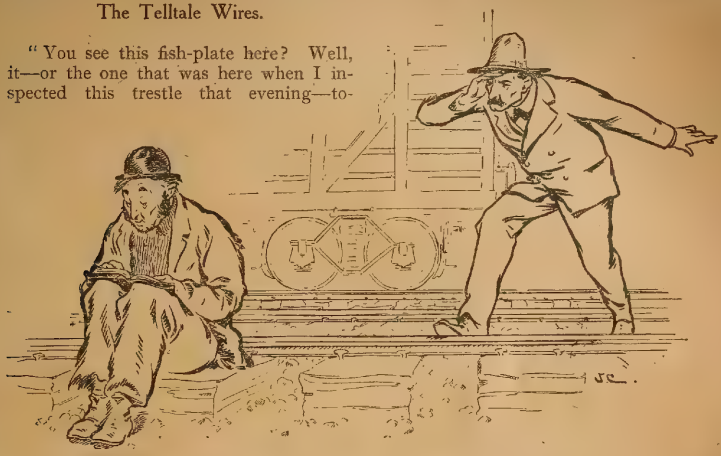
"Then along came a relief-train from Los Angeles, with doctors aboard, and the wounded were carried off to the city.

"With the wounded out of the way, I went with the trainmen to try to discover what had happened to that flier.

I would have sworn the trestle itself was all right, for I had been over it just before sundown. But, all the same, the trouble lay in the trestle, and not in the engine or cars. What do you think we found?

The Telltale Wires.

"You see this fish-plate here? Well, it—or the one that was here when I inspected this trestle that evening—together with its bolts, had been removed. The fish-plate connects these two rails, of course. Through the holes in the rails from which the bolts had been removed those dastardly rascals, whoever they were, had drawn heavy wires—one wire for each rail.



"STORNI STEALS UP BEHIND THE READER, REAL SLEUTH FASHION."

"Then the two wires had been joined into a single strand, and the strand itself was what we found that night, leading away into the bushes on the steep embankment there.

"Now, see how the trap worked. When the flier reached the trestle, all those wreckers had to do was to pull on the wires, thus spreading each one of these connecting rails out toward the edge of the trestle.

"I'll wager you'll travel this country over, and never anywhere else hear of any such devilish trap as was sprung on us that night. The Espee put up ten thousand dollars reward for the arrest and conviction of the fiends; but, so far as I know, the reward is still unclaimed."

I went down to San Pedro, the port of Los Angeles. You can inhale the fragrance of San Pedro before you fairly get within her limits, for she smells of pine lumber—smells of it while you are yet afar off. Not even in Oregon or Washington, where most of that lumber comes from, had I seen so much wood-stuff in one place at one time.

That lumber was consigned to a hundred different places in the Southwest, and a huge instalment of it was started on its journey each day, hauled by engine No. 2791 of the Southern Pacific—an eight-drive-wheel compound, one of the biggest on the Pacific coast.

The day I was at San Pedro an Espee lumber-train stood ready to pull out. It was in charge of Conductor Gilbert, with Engineer Cram up at the head. If I had wanted then to walk from the caboose, where I met Conductor Gilbert, up to Engineer Cram's cab, I would have had to walk exactly half a mile; for that train was twenty-five hundred feet long.

"Now, don't tell me you ever saw a logging train or any other kind of wood-stuff train just as big as this, because you didn't, not even in Oregon," said Conductor Gilbert. "We've got fifty-six cars loaded with 1,100,000 feet of lumber, weighing 4,500,000 pounds, and

worth $27,500. And what will surprise you most is that we pull a load just like this out of San Pedro every day of the week. We're no slouches when it comes to lumber."

Two Thousand Tons Daily.

I walked that half-mile, just the same, up to 2791.

"Ain't she a beauty!" exclaimed Engineer Cram, meaning his eight-drive-wheeler. "She hauls her two thousand tons of wood out of here every day, and the prettiest thing about her is this little lever here," indicating the "handle" connecting the air-brakes.

"By merely touching this lever," went on Cram, "with a child's touch, I control a half-mile of cars with their prodigious weight. But, say, you going up to Los Angeles now? Well, if you think you see wood here, just go down to our yards there, and take a look at more wood in one place than you'll ever see anywhere else, no matter how much you travel."

In Los Angeles I went to that part of the Espee yards mentioned by Engineer Cram, and there indeed was a city of wood. There were no less than thirty acres of railroad ties. I speak of them as a city, because those ties, piled up as high as the highest two-story bungalow, were arranged symmetrically in blocks, like the streets of a city.

Those ties were brought to Los Angeles, by ship and train, from the Northwest, and there piled up to dry, after which they would be treated to a bath of zinc oxide and shipped to all parts of the Harriman system. I was told that it was the largest collection of railroad ties on earth.

A City of Ties.

Now, through the streets of this city of ties ran railroad tracks, and over these rolled freight-trains, here unloading, there loading, more and more ties, so that the millions of ties seemed never to be reduced in number.

"Welcome to our City of Sleepers," said an old brakeman, with a winning smile. "I saw you either making notes or reading from a book as we came up," he added, "and you reminded me of that chap we overhauled the other day in the yards at Santa Barbara. Queer case, that!"

The brakeman sat down on the side of his flat car, took a chew of tobacco—lighted cigars and the like being prohibited in this City of Sleepers—and then proceeded:

"Yes, queer case! Say, can you tell me what on earth a thief wants to steal Bibles for, and only Bibles? I mean, why does he want to steal only Bibles when he might have stolen other things—prunes, for example?

The Espee Bible Thief.

"Well, that case up at Santa Barbara was one of theft of Bibles only, when the thief might have taken other things of the kind I have mentioned. No. 244 of our line was running somewhere between San Luis Obispo and Guadaloupe, when some one busted a car-seal and ransacked the car and made off with a heap of Bibles.

"When the train got to Santa Barbara, the broken seal was discovered—the Bibles were gone. But all the prunes and other things in that car were left where they were, though all the cases containing them had been mercilessly smashed open.

"And here comes a joke on Bill Storni—he's a constable at Santa Barbara. Storni, one day soon after the robbery, was walking through the Espee yard between a lot of lumber-cars, when he espies a tramp reading a book. Storni steals up behind the reader, real sleuth fashion, to see what sort of literature was there on exhibition.

"'A Bible, by Jove!' cries Storni, pouncing upon the reader. 'I reckon, friend, you are wanted in this precinct. What you got to say for yourself?'

"'Wanted for what?' inquires the Bible class of one member, meeklike.

"'For stealing Bibles, of course, out of that Espee car the other day, up San Luis Obispo way.'

"'My good friend and brother,' says the Bible class in a psalm-singing, sanctimonious tone, 'let me remind you that persons who read Bibles do not steal them.'"

THE SPIDER OF PALERMO.

BY EDWARD BEDINGER MITCHELL,

Author of "An American Knight Errant," "The Yellow Rose," Etc.

Several Bluffs are Called, but Nobody Manages To Rake In All the Pot.

SYNOPSIS OF PREVIOUS CHAPTERS.

STEPHEN PAGET, a retired newspaper man, and his friend Marshfield, are attracted by the sight of a beautiful girl in a poor building opposite Paget's apartment. A few minutes later a middle-aged woman in the street below is heard to scream hysterically, and on Paget rushing down to find out the reason, she says she has seen the evil one, indicating as the place the room in which the two men have just seen the girl. Paget escorts the woman to her store in the basement of the cheap house, where he learns that her name is Rosa, and that she and the girl, Maria Bigontina, live in the room above. Some days later, Paget finds the girl in a park, homeless. Rosa has disappeared and Maria's brother is also lost. Paget arranges for her to stay at the Walton until her people can be found. He goes to interview the landlord, who has turned her out, and in her room has an adventure with several Italian cutthroats. Dining with Maria, he is warned by a Hungarian orchestra leader not to take the first cab or walk when going home.

The cab they do take breaks down, and in the confusion they are actually led into taking the first cab. The driver tries to abduct them, but Paget thrashes him, and after seeing Maria to the Walton he changes coats with the driver and goes to the place the latter was instructed to drive them to. He sees his enemy, but fails to learn anything. Next morning, with Maria, he dodges the spies and carries the girl to the seclusion of his cousin's home.

As Paget is going home he is met by Marshfield, who insists that he go to his house to dinner. A scheme is on foot through which the elder Marshfield may purchase valuable mining property in Abyssinia, and it is practically settled that Paget and young Marshfield shall go to look things over. Paget sees one of the guests at the dinner in conversation with one of the Italians of his previous adventure, and, later, he and Marshfield overhear a conference of the cutthroats, in which it is planned to get possession of Maria.

Maria sees Paget with Signor Rocca, her enemy, and thinks he has betrayed her. Rocca invites Stephen and young Marshfield to lunch, and afterward asks Stephen to go and see some Abyssinian specimens at his warehouse. It is the same address as they had attempted to lure Paget and Maria to before.

CHAPTER XVI.

I Learn More of My Host.

THE hand that was about to raise the cigar to my lips fell to my side, my jaw dropped, and I stared at the man, white and gasping. Then abruptly I snatched the napkin from the table, buried my face in it, and fell to coughing. It was an old device, as old as social hypocrisy, but some mask for my feelings was necessary. The napkin and the cough were the first which occurred to me, and I coughed until my face was purple.

"Some water, Mr. Paget?" With the greatest solicitude Rocca filled a glass from the carafe and handed it to me. I took it from him, drained it, and set it down.

"Thank you. Something caught in my throat—most disagreeable."

I pushed back my chair and rose to

face him. My mind was clear now. "In Barent Street, if you know where that is." The words were the key to all the puzzles of the past. At their sound the mysteries which had so perplexed me fell into orderly ranks like well-drilled troops, ready for my inspection.

Rocca was the chief with whose name Ghedina had terrified the scoundrels of the Auvergne. He it was who wanted both the girl and the missing "key" locked in my desk. It was his warehouse to which I had driven in the clothes of the cabman.

And Rocca had been in the cab with me when I stopped in Eleventh Street to talk to Mrs. Noyes and Maria. It was from him she was fleeing, and she had seen him in my company. That was why I was "vile." That was enough for me. My heart leaped and my love sang in my breast.

I did not stop to piece together the puzzle. I knew now why Maria had turned against me, I knew from whom came the blows aimed at her. It was enough; the rest—Abyssinia, the missing Pietro—all could wait.

"Well, Mr. Paget, if you have recovered, we might start."

"Oh, yes; certainly."

I dropped the napkin clutched in my hand on the table and turned away. Nothing was further from my intention than to visit 78 Barent Street in this man's company. Inwardly I blessed the cabman who had given me the information. Without it I should have walked blindfold into the trap so carefully prepared.

It was for this that David had been politely removed—the son of old Marshfield Rocca did not dare to touch, but the obscure Stephen Paget was easier prey. My one protection, as Ghedina had said, was my knowledge of Maria's hiding-place. That knowledge I had unmasked to Rocca; there was nothing now to prevent my being put out of the way as an unwelcome intruder who knew too much.

All this I realized; there was one thing I did not know—how to free myself from the spider's web into which I had so rashly ventured.

"I will call a cab," said Rocca. He walked over to the telephone in the library of the apartment and I heard him summon a carriage while I sat racking my brains for some excuse which would not betray my knowledge to my host.

"It will be here in a minute." The Italian turned from the instrument with his affable smile. "Will you have something while you wait—whisky and soda the Americans like, I am told."

"Thank you. Like my friend, I fear I have also forgotten an engagement. It just occurred to me while you were telephoning," I added hastily, catching the sudden chill in Rocca's deep-set eyes.

The smile on his lips was still there; had I known nothing of Barent Street I would never have thought to have watched his eyes.

"An engagement? Do you young men have so many engagements or so few that you can not remember them an hour in advance?"

"It does seem rude." I rose to my feet, answering the apparent and natural pique of my host. "You must give me another opportunity to apologize. This afternoon I can only ask your indulgence."

It was clumsy I knew, as clumsy as the cough, but I preferred to be clumsy rather than dead. Rocca's gang was not going to "get" me in 78 Barent Street, and the quicker I was out in the broad light of New York's afternoon the better for me. My host merely smiled in gentle disappointment.

"It is unfortunate. I had looked forward to a pleasant and profitable hour or two. But youth will be served. Victor, Mr. Paget's coat and hat. You left them inside, I think."

"*Si, signore.*" At his master's summons Victor had appeared from the hidden regions of the apartment and now stood in formal respect before us. Having declined Rocca's invitation to walk into his trap, it seemed that I was to follow in Marshfield's footsteps and be eliminated by sheer, cold courtesy from his presence.

I could ask for nothing better. My one desire was to return to Maria, to explain my association with her foe, with her aid to unravel the tangle of the situation, and then to act. Expecting to be helped into my overcoat, I half turned

to Victor. The servant stood there, silent, decorous, obviously efficient, and perfectly trained. He held neither my hat nor my coat.

"Where are Mr. Paget's things, Victor? I told you to get them."

Rocca's voice was sharp with command and displeasure. Apparently lack of attention to a guest caused him more concern than all the black crimes my mind was laying at his door.

"I did not understand, sir. I took them inside to brush them, but I have not as yet had the time. Shall I fetch them, or will the gentleman wait?"

"You are stupid; the gentleman does not wish to wait. Stay! We will get them ourselves. This way, Mr. Paget. I want to show you some of the possibilities of a New York apartment, since you have not the time to investigate the possibilities of Abyssinia."

I cared nothing for his apartment, but I cared less about marching into the street hatless and coatless. Also I was anxious to delay the inevitable arousing of his suspicion. His ignorance of my knowledge was a weapon I meant to use, and I followed him obediently as he led the way from the dining-room into a small pantry.

Rocca flung open another door. In a space that was half closet and half room, lighted only from the pantry, I saw hanging on a wall two or three hats and coats.

"Which is yours, Mr. Paget?"

Rocca stood with his hand upon the knob, waiting; behind him Victor blocked the entrance to the dining-room. Why had the butler turned himself unasked into a tailor for my benefit, and why was the great Italian now doing his servant's work for him?

There was nothing to show any one in a coat-closet and a pantry. I looked sharply, not at the row of garments hung up for my inspection, but at the impassive face of my host. He moved a little impatiently.

"Will you see which is yours, Mr. Pa—"

His great form flattened against the door as I drove my fist into his moving lips. His left hand had risen to the back of his neck. It was the signal with which Cagno had hurled his ruffians on me in the attic. Once more I was beforehand with them.

Victor leaped as I struck. I felt his arms wrap themselves about my body, felt myself falling backward into the hidden peril of the closet. Clutching wildly in the air, my hands closed about the head of the man I had dazed with the blow. For an instant the three of us swayed unbalanced on the threshold; then the mass toppled and fell.

Rocca was used to fighting with his brains, not his hands; to that fact I am convinced I owe my life. What my blow had begun the fall completed, and he lay inert and more than half-stunned upon the floor. The valet was made of sterner stuff. His arms were about me like the coils of a serpent. I could writhe and kick at nothing, but I could not loosen that paralyzing grip.

His dark face was close to mine as we tossed about the floor. The eyes which had been so veiled with quiet deference blazed above me and I felt his hot breath on my cheek. Suddenly the coils about me loosened of their own accord. One hand shot to my throat, pinning me to the ground, choking the very life from me; the other reached back for the knife—the silent, beloved weapon of the Mediterranean outlaw.

He could have strangled me there without a sound, strangled me and none of the hundreds hurrying along the sidewalk a few feet below would ever have heard a cry. He could have—but he did not. The Latin does not murder with his naked hands; the man had spent his life with the knife, the thought of it and the use of it were born in his blood. Now, in the moment of his triumph, he reached for it.

It was a disastrous blunder. Though the grip on my throat never loosened, his weight lifted from my body, as he rose, striving to free the useless weapon.

My knee shot up. It caught him an inch below the ribs and every rigid muscle of the man shriveled. The weight of the body fell back upon me, but now it was a dead-weight. Before the breath returned I had flung it from me and staggered up to reel, gasping and black-faced, into the pantry.

Instinctively I slammed the door upon my assailants, falling against it with a

sob of joy. My knees shook under me, my whole body heaved in a desperate fight for air—but I knew that I was safe. The click that came to my ringing ears as the door closed told the story. The closet was a trap; Rocca and his man were my prisoners.

From within came a series of thuds as of heavy bodies hurled against the door, but the faint sounds were strangely muffled. As I listened more of the truth dawned upon me. Once within that closet I could have screamed until the Day of Judgment and no sound would have penetrated the deadened walls.

Possibly they had meant to suffocate me there; possibly there was a trap-door, another entrance, something—Heaven knows what. Whatever it was they had prepared for me, they would have to face it themselves.

It was a convenient apartment—very. Rocca's words came back to me as I gasped for breath against the door. It had come close to being too convenient for me, but now I was master of it. Slowly my strength returned, and at last I moved away to examine my conquest.

Save for the prison-closet it was an ordinary New York apartment of the most expensive class. The furnishings were more than ordinarily luxurious, it is true, but except for their cost there was nothing noteworthy about them. From one room to another I wandered, secure in my conviction that my two assailants were harmless, reluctant to summon the police until I had learned all that the home of the "chief" revealed.

In a small den off the sitting-room, which I took to be Rocca's private sanctum, I found a roll-top desk. It was locked, but I tugged and pulled and beat upon it without compunction until the lock was forced. They had tried to kidnap the girl I loved, they had tried to lure me to an unknown fate in this web of iniquity; I had no qualms of conscience in thus forcing my unwelcome way into their secrets.

On the top of the desk, in plain sight as the cover rolled back, were two maps and a bundle of formidable legal documents, lying there as though their owner had been too pressed for time to deposit them in their proper resting-places. The familiar and detested word, "Abyssinia," caught my eye and I thrust the maps into my pocket.

Though still unexplained, I was convinced that there was some connection between that far-off wilderness and my own adventures; a little documentary evidence would do no harm. The legal papers were in Italian. I did not stop to decipher them, but they too joined the maps for safe keeping in my pocket.

Then, deliberately and systematically, I sat down to examine the contents of the desk. Under my hand was a scrap of paper with a few figures on it. It was nothing but an address, "27 W. 11," but my lips whistled with satisfaction as I looked at it. It was the address of Mrs. Noyes; Rocca must have written it down on his return from that fatal drive with me.

It was the concluding touch of proof. Maria had not reviled me, Stephen Paget, but the man she had seen in Rocca's company. Well, that was settled; she would never see me there again.

I ran through the contents of the desk, emptying drawer after drawer, searching for I knew not what. The papers I dragged into the light were nothing to me—mere lists of names and street numbers, occasionally columns of figures that evidently represented sums of money, documents written in an Italian hand that it would have taken me hours to translate and might perhaps have resisted all my efforts, for the little that I did read conveyed no meaning to my mind and I met with strange combinations of letters never encountered in print.

One thing, however, encouraged me to persist. On a separate piece of paper, standing out clear on the white surface, I read the words: "Pietro Bigontina—78 Barent—X." There was nothing else on the sheet, but somehow I gathered the impression that it was of importance to the owner of the desk.

To me it meant but one thing: The missing boy was, or at one time had been, at the warehouse to which I had driven and to which Rocca had so cordially invited me for the second time.

The paper joined the maps and the legal documents in my pocket as I bent once more to my task. Then suddenly I sprang from the disordered desk,

startled by the sudden buzzing of the door-bell. Again it rang, and now my straining ears caught the sound from the hallway beyond the murmur of voices.

My visitors were impatient. For the third time the bell sounded and I smiled grimly. They could ring through the afternoon and they would not disturb Victor in his muffled closet. No sleek, deferential serving-man would bow before them as the scoundrel had bowed before me.

The smile died abruptly. Who knew what secret exits there might be to that prison into which I had thrust Rocca and his servant? While I was poring in fatuous satisfaction over his papers, who knew what that all-powerful serpent had been doing? I had been a conceited fool, and if I was not quick I might have to pay heavily for my folly.

The bell clamored more loudly than ever as I dashed to the telephone. If they kept that up I would have the police upon them while they were still pressing the button with frantic energy. My hand was on the receiver, but I jerked it back. The bell had ceased to ring, and from the hallway came a new sound —the sound of a key being thrust into a lock.

It flashed over me in a second. "A friend" had secured the apartment for Rocca; he was the chief" and the friend probably one of his lieutenants whom he had ousted from his quarters. Out of respect for his master, the friend had been ringing; now, satisfied that something was wrong, he was letting himself in with his own key. And I was caught.

While I stood arguing with the lazy clerk at police headquarters, they would be upon me. Much chance I would have, with my back turned to them, talking into the impassive telephone!

It takes long to tell it; it did not take long to think it. The key was still rattling in the lock when I was back beside the door. Twice I had saved myself by superior speed, and it was speed on which I would rely now.

The key turned, the door swung open, a head was thrust cautiously forward as though its owner hesitated to intrude upon sacred precincts. That misplaced reverence was a godsend. Overlooking me as I crouched by the side of the door, the eyes were still searching the deserted calm of the apartment when I struck. My fist crunched against the head, the head against the wooden door, and then I charged.

How many of them there were I did not know—I have never known. My fists shot out again and again to land on soft, yielding flesh. Futile, surprised blows fell upon me in return and I was through them—through save for one man. In the rear of his companions Ghedina stood, blocking my retreat. I pitched into him headlong, and the little man went down with me on top of him.

For such an onslaught he had been no more prepared than the others. He struck feebly at me, a walking-stick clutched in his hand, but if the blow landed it did no damage. With one hand I caught his wrist and with the other I struck savagely at the evil face. The stick dropped from his hand and clattered down the stairs as I sprang after it, clear and free.

A few steps below me lay the cane and I stooped to seize it as I ran. A bullet whistled past my lowered head and sank into the wainscoting.

On the corner a blue-clad giant raised his hand and the hurrying traffic of the avenue halted. For a second I gaped at him, an unspoken cry for help trembling on my lips. He was the police, he was the law, and he spent his day in regulating trucks and broughams, victorias and hansoms, while men were murdered and women stolen ten doors from him.

My mouth opened, but the call did not come. Ghedina and his friends were in the apartment now, the door of the prison open, Rocca free. To summon the police was to involve oneself in endless legal technicalities—and all the time Maria was exposed, her refuge known and open.

CHAPTER XVII.

A New Use for a Telephone.

THE policeman I left to blow his whistle and wave his hand undisturbed. A new scheme had come to me, startling in the vision of brilliant tri-

umph, daring, and yet too rich in possibilities to be flung aside as foolhardy.

Fascinated by it, I stood for a minute staring at the stick in my hand, my mind leaping over the difficulties in the path to the dazzling reward. The vision was too bright for me to turn my back upon.

Mrs. Noyes herself answered my call from the nearest telephone-booth.

"Yes, this is Stephen." I found myself speaking quite calmly, even slowly, though my heart was jumping with excitement. "I've found out some things, Cousin Lucy; I'll tell you what they are later. Now I want you to do exactly as I say.

"Yes, yes, I know you do; but this is very important. Don't go out of the house yourself, and don't let anybody in on any pretext—no gas-men or telephone-men, or anybody. Oh, it's all right, Cousin Lucy—don't worry. I can't explain over the telephone. I'm in a hurry, anyway. Yes, I'll see you very soon. Good-by."

I hung up the receiver with the feeling of one who has burned his bridges behind him. That was attended to; now for Marshfield. His house was but a short distance away, and I went there as fast as a cabman dared to drive through crowded streets.

Dave was at home—the most unlikely place to find a New York man in early afternoon; but he was a law unto himself, and he was there.

"I want you," I cried as he answered the footman's summons in person. "Come on."

"But I have something—"

"Cut it. There's no time to talk. Come."

David's eye rested on my excited face for a fraction of a second before he reached for his hat. Deliberately he selected a heavy stick from the rack while the astonished servant held his coat.

"After you," he said, as the man opened the door, and then we were outside. It had taken less than ten minutes to get David. Time was precious, but his company was worth more than that.

"Seventy-eight Barent Street," I called to the cabby, "and drive fast."

A shrill whistle came from Marshfield, already seated in the cab. "What is it, Steve?" he demanded as the driver's whip curled over our heads and we started on our journey.

"Rocca tried to take me there after you left. He didn't know that I had ever heard of the place. When I wouldn't come, he tried to fix me in some sort of a trap he's got there. I put him in instead, and got this"—I held up the slender yellow walking-stick, with its round silver top, curiously hammered.

"You remember, the musician said he knew them by their sticks. This is one of them. We'll get into the warehouse with it. The boy Pietro is there. We'll get him out. I'll bring him back to Maria."

The short sentences told the story clearly enough. Marshfield's eyes lighted at the sheer audacity of the thing, and his hand gripped my knee in rare excitement.

"We'll do it. By Heaven, we'll do it!" he cried. Suddenly his grip relaxed and a smile softened the firm mouth. "'We'll get him out. I'll bring him back to Maria,'" he quoted. "Where do I come in, Paget?"

"You come in as the best friend a man ever had," I cried. "I wouldn't ask it of you for myself; it's for her, Dave—it's for her, I tell you."

"Oh, that's all right," Marshfield growled, with obvious embarrassment. "Leave the sentiment until there's nothing else to talk about. When we're through with this, I'll call in state and congratulate you both. What do you propose to do down here?"

"Heaven knows," I answered. "It's a big bluff, that's all. We'll go as far as we can, and when we're stopped we'll wave the stick at them."

"And then I guess we'll fight," retorted Marshfield. "You ought to be good at it by this time. You've had practise enough."

We planned no further, for there was nothing to plan. Truly, it was all a bluff, and in the light of David's cool vision another fight did seem to be all that we would gain by it. But, as Marshfield had said, I was used to fighting with them. Hitherto I had won, and this time I had David with me. We would win again, if it came to that. And there was joy in the thought that we went to strike in Maria's cause.

David seemed to read my thoughts, for his cool tones broke into them as we reached the spot where I had overthrown the cabman:

"Do you happen to know whether you are a *Lancelot* or a *Quixote?* In other words are you a hero or a fool? Oh, don't look at me like that—I'm not half as crazy as you are. What I mean is, how do you know this young cub wants to be rescued?"

"He's her brother," I gasped. This view of the case had not presented itself to me for a long time.

"Oh! Then you're in love with the whole family? That's very nice."

"Confound you, what do you mean?" I cried hotly, too jealous of my new love to remember how ineradicable was David Marshfield's affection for a jest. He viewed the world through the glasses of his humor, and it was inevitable that his language should reflect the spectacle.

He had spoken as he would have had we been driving to the sedatest of dinner-parties; but when he saw that he had touched me, his tone changed.

"Pardon me, Steve," he said, a wealth of affection in the quiet words. "But really, now, how *do* we know that this Pietro isn't playing some kind of a weird game? From all accounts, everybody else in the party is—except his sister, of course," he added hastily.

"That's the whole thing—except his sister. We don't know," I went on thoughtfully, "but we can guess. From what we've heard, I'm sure of it. I've heard them talk about having the boy, and wanting the girl now. Well, the girl doesn't want to go; why should the boy?"

"I guess you're right. Anyway, we'll rescue him first and talk about it afterward."

It was all very well to speak of the rescue with sublime confidence in its coming. To David the expedition was a game—a more exciting game than any he had yet played, but still a game—in which the stakes were his life, and the prize help to his friend, and for himself the joy of conflict and danger.

Barent Street in the daytime was a far different place from the deserted, rain-swept solitude I had driven through before. Trucks jolted along with deafening clatter, the narrow sidewalks were blocked with packing-cases and hurrying men, the warehouses which had risen silently into the night were teeming with life and noise now — and Seventy-eight had awakened with its neighbors.

Just what we had expected, I do not know; but it was certainly not this. We had come prepared to storm a citadel of crime, and we found ourselves in a place devoted to prosaic business, with no business of our own to explain our presence.

For the moment it seemed that our journey was to end in a humiliating dismissal on the ground that we were wasting the time of busy men.

The cab drew up in front of the door from which I had seen Cagno emerge, and we descended. A shabby individual, armed with no more formidable weapon than a broom, paused in his task of raising clouds of dust about his head long enough to ask us, in broken English, what we wanted.

What did we want? I looked helplessly at him and was silent.

Had he halted me with a revolver, I would have thrust the magic stick in front of him, or risked the accuracy of his aim in a sudden rush. But he was nothing more than a humble hireling, sweeping out the hall in front of a warehouse office. I looked at his simple, stolid face, and thrust the stick behind my back.

"What you want?" he demanded again.

There was nothing suspicious about the question. It was exactly what every one of the thousands of ignorant immigrants in the city would have said under similar circumstances.

Marshfield recovered himself first.

"Lemons!" he muttered, his head thrown back as he sniffed the heavy odor of the place. "It's lemons."

"Eh—what?" asked the sweeper, staring with dull eyes from one to the other of us. "What do you want?"

His command of English, it seemed, did not extend beyond that phrase.

"We want lemons," declared Marshfield, with a solemn face. "Where's the manager of this place?"

The fellow pointed with the handle of his broom to the dirty ground-glass of a door behind him, on which the letters F and E remained to indicate that it had

once been labeled office. Then, satisfied that he had done all that was required of him, he went on with his sweeping.

We pushed open the door and walked in, unannounced.

Crouched over a desk in the corner, an ill-favored cigar smoldering in his mouth, was an individual in shirt-sleeves and a gaudy waistcoat. Coarse, close-cropped hair stood up like black stubble on his bullet head; a thick neck reached down to sloping shoulders and a flabby frame.

The only other occupant of the room was an insignificant young man perched on a high stool, with one enormous ledger in front of him, another by his side, and a vast number of papers stuck on a cluster of spikes about him.

The man at the desk looked up at our entrance, took the cigar from his lips, and growled an inarticulate and surly greeting.

In return Marshfield beamed upon him.

"Business looks good," he said affably.

"Huh! Fair." The grunt was scarcely more distinguishable than the previous growl of welcome; but I made out two things from it: first, that the man had not spoken English from his cradle; and, second, that missing teeth and a scarred lip made speech of any sort difficult to him.

"Prices pretty high?" continued Marshfield.

"Not so very. What do you want?"

"Lemons," said David shortly. He knocked a dirt-covered newspaper from the broken cane seat of a disreputable chair, pulled it close to the desk, and sat down. "You sell them, don't you?" he asked, as the round eyes of the man in front of us protruded, and the sweeping mustache bristled upward at his visitor's assurance.

"It's no corner grocery," retorted the fellow.

"I know it isn't." David's manner changed abruptly. "Look here, friend, are you in the fruit business, or are you not? We haven't got the whole day to waste here, you know."

"Can't you see I'm in the business? What do you think all these trucks are doing?"

"Well, why don't you talk business, then?" retorted Marshfield. "I want to buy some lemons."

"You ought to go to the office on Stone Street. This is only a warehouse."

There was still, to put it mildly, nothing gracious about the man, but there was at least some interest in his voice. Either he was telling the truth, and rude merely because a lifetime spent in wrangling with truck-drivers does not teach courtesy, or else he had decided that for the sake of appearances he must assume some attention to our mission.

Gradually he permitted himself to be persuaded that he could further the interests of the Continental Fruit and Import Company by listening to us, and he and Marshfield were soon deep in a discussion of the intricacies of shipping a car-load of lemons to Cincinnati.

Taking advantage of his superior's absorption, the young man with the ledgers slipped down from his stool and marched out into the courtyard on some errand of his own. We were alone with the manager—and as far from Pietro Bigontina as when we started.

Marshfield was nearing the end of his rope. In a minute or two more he would either have to close the deal or reject it. In either case he would have no further excuse for lingering in the office; and where we were to go when we left was beyond my power to perceive. The very commonplaceness of the den was for us the most impenetrable of barriers. Any door, however strongly guarded, would have been easier to pass than this dead, blank wall of insignificance.

For a minute I was tempted to seize the manager by his fat neck and choke the truth out of him. But I began to doubt if the truth was there. He looked like the very vulgar superintendent of a warehouse, and it was quite possible that that was exactly what he was.

"I will think it over," Marshfield was saying when the telephone interrupted him. The manager thrust his injured lips to the instrument to growl in his indistinct voice:

"Hallo, hallo! Who is it? Why don't you speak louder? I can't hear you—I say. Ah, *si, si, signore.*" He was speaking Italian now, and had evidently recognized the other. "No,

signore, nothing out of the ordinary. It has been quiet. I am listening, Signor Cagno."

He did not listen long. If it was Cagno who was talking, I proposed to have him talk to me. The last word had barely left the man's lip when my two hands shot out, and the fingers fastened in the soft flesh of the red throat. The receiver dropped to the desk, there was a deep gurgle, and the thing was done.

Jerking the helpless lump from the chair, I flung him heavily on the floor.

Marshfield fell upon him before the wretch had time to scream, and I picked up the receiver. From the torrent of voluble and profane Italian which flowed into my ear, I gathered that Signor Cagno was anxious to know what all the row was about, and why, when he condescended to talk, various kinds of pigs and scoundrels did not listen to him.

I was very sorry. A drunken teamster had interrupted me at a most inopportune moment. It was annoying, but Signor Cagno knew the cattle one had to deal with in Barent Street. Would he be so good as to repeat what he had been saying?

The sole reason that my voice sounded peculiar to him was the atrocity of the connection. Also, Signor Cagno was aware that I had the misfortune to be afflicted with an accident to the mouth. If it disturbed him it was a thousand pities, but I regretted that I knew of no remedy.

All this I mumbled into the receiver in a voice as much like the indistinct rumblings of my victim as I could contrive to make it, while David's relentless knee and fingers held the manager silent, though squirming, on the floor. My verbose apologies stopped the flood of abuse. Still angry, but somewhat restrained now, Cagno's words came to me:

"Let it pass this time; in future I want more attention when I speak. Now listen. You will tell Antonio that the goods on the top floor are to be shipped by the rear door at four-thirty exactly. Do you understand?"

"I am afraid that I do not." It was the most truthful thing that either Marshfield or I had said since we entered the precincts of the warehouse. "What are the goods?"

A wild splutter of rage was my answer. When its first violence was spent, I heard the scoundrel's voice shrieking:

"What is it to you what they are? Who are you to ask questions? Do as you are told, or you will suffer for it. You know Antonio—tell him what I say. And, mind you, don't talk to any strangers and don't listen to any fine schemes. The man who blunders this time will pay for it."

The receiver at the other end of the wire was hung up. Cagno had given his orders and was through with me. On the floor by the desk, Marshfield put a little more of his weight upon the crushed form of the manager as he looked up at me.

"Did you learn anything?" he asked.

CHAPTER XVIII.

The Goods on the Top Floor.

SOMETHING I had learned. "The goods" were on the top floor. They could be no mere boxes of lemons; there was more than a fair chance that they were the missing Pietro. Who Antonio was as yet we had not discovered, but the efficacy of the walking-stick was still untested.

In the meantime there was the flabby wretch on the floor. The moment Marshfield's grip upon him relaxed, his screams would bring the whole horde about our ears like bees from an overturned hive. David was looking at me inquiringly, but no inspiration came to me from the swollen, choking face pinned down in the dust of the office.

"Well," said my friend at last, "what is it to be?"

"I don't know," I muttered. "We've got to find a man named Antonio. But what are we to do with this?" And I pointed to the sprawling manager.

"Take him with us," suggested David with a sudden chuckle. "We came to buy lemons; I guess he's the stuff, all right."

"He won't come," I replied a little doubtfully, for the project was not altogether impossible.

"We haven't asked him yet. You will come, won't you?" Marshfield turned back to his captive with a tight-

ening of his fingers and a fierce snarl that boded no good to the unfortunate rascal. David could act as well as joke.

No answer was ever given to his cordial invitation. Before the manager could do more than gasp and sputter, the office-door opened and the young clerk entered. He was well on his unobtrusive way toward his place in front of the ledgers before he noticed anything unusual about the dreary den. Then he fell against the high desk, his thin face a dead white, his hands spread out as though to ward off a blow.

"Great Heavens!" he gasped. "Great Heavens!"

I blocked him as he sprang in tardy panic for the door.

"You keep still," I ordered sharply, "or it will be the worse for you."

It was no fighter whom I faced down so easily. Long hours of weary drudgery on a high stool had not reddened his blood or steeled his nerves. I was a more powerful man than he, and the knowledge of it was to be read clearly in the panic-stricken eye fastened on me. For a moment I menaced him in silence, and then sheer, childish fright forced him to cry out:

"What is it? We haven't any money."

"Shut up. We don't want your money. We're the police."

It was a happy inspiration born of the boy's terror. If he continued to think he was about to be murdered, he might take it into his head to indulge in a death-scream that would ruin everything. If he imagined it was the hand of the law that held him, he would, I hoped, seek refuge in abject obedience.

But the effect was greater than I had anticipated. With a gasp of dismay, he shrank away from me, his lips twitching.

"The police!" he moaned. "I knew it. I said there was something queer about the place. But I haven't done anything." His voice rose in shrill protest. "I haven't done anything, I tell you. I'm only a clerk here. I don't know anything about them. It's no crime to make a living. What could I do? Where—"

"You shut up." My savage order checked the loud, quavering appeals which threatened to pierce the grimy windows of the offices and penetrate into the turmoil of the court. "Nobody's going to hurt you—not yet, that is. Do you know who Antonio is?"

"There's a man named Antonio upstairs. But I don't know, I say. I'm only the shipping-clerk. I haven't—"

"How do you get up?" Marshfield interrupted curtly from his post on the prostrate manager.

"There's a freight-elevator behind there. They never let me go up. I—"

"Give me that cord, Steve."

With a nod of his head, David indicated some heavy twine under the desk. Then, whipping out his handkerchief, he jammed it into his victim's mouth, rolled the miserable wretch over on his back, and tied his hands with the cord I handed to him.

"Now"—he rose with a sigh of relief—"now he'll stay quiet for a while. In the meantime, we can go up-stairs."

Instinctively I started toward the door, to be stopped by a new thought.

"What are we going to do with him?" I asked, pointing to the terrified youth by the desk.

"Use him," retorted Marshfield swiftly. "Look here, you!" He strode over to the boy like the personification of avenging justice. "You say you don't know anything about this business? That's a pretty fishy story. Do you want to spend the night in the police station?"

A shudder passed over the clerk's slight frame, and his chin twitched. As the pitiful figure rises before my eyes again, I am convinced that he was bedeviled with the horror of scandal and disgrace rather than by actual physical fear of what Marshfield or I might do to him.

Quite likely he had a family skilled in the art of arranging unpleasant domestic scenes; possibly he fancied himself in love, and was appalled at the thought of the intervention of the police in his suit. At any rate, I have never been able to persuade myself that he had any guilty knowledge of the secrets of the warehouse, and I know that he was as clay in Marshfield's rough hands.

"You don't care about it, eh?" David glared at him with a protruding jaw and a frown that would have done

credit to his father's sternest moments. "Well, we'll give you a chance. If you make good, you may square yourself yet. You stay here. Don't you let anybody in. Tell them the boss is out. If the boss moves, kick him till he keeps quiet. Come, Steve."

With a farewell scowl, David turned on his heel. The office-door closed upon us, and we were in the hallways once more. The sweeper and his rubbish had advanced into the court; the road lay open.

Far back in the freight-strewn, dimly lighted recesses of the warehouse we found the elevator. A stolid, surly porter, lounging against a packing-case, looked at us in some surprise as we burst in upon his leisurely pipe, but he followed us into the heavy car, and started the machinery without objection.

Past two floors we went in silence. At the third he stretched out his hand and stopped the car without vouchsafing any explanation. A glance upward into the gloomy tunnel of the shaft showed that we had not reached the top.

"Go on," cried Marshfield. "What are you stopping here for?"

The porter simply pointed at the empty floor in front of us.

"Go on," ordered Marshfield, more peremptorily this time. "We want to go to the top."

"No go more."

It was as though a statue had spoken. No change came over the wooden face in front of us; there was no expression in his voice. The man merely stood and pointed as if there were no question but that we must go.

"You take—" David took an angry step toward the fellow, and the sentence died on his lips. The wooden statue had sprung into life. From the corner of the car, half crouched like a beast about to spring, he glared at us, and in his hand was a long knife.

"The deuce!" Marshfield measured the distance with the trained eye of the boxer and stopped. His fist could not reach the man, and fists against knives was poor business at best. What he would have done I do not know—David was no lover of diplomatic retreats—for while the two faced each other, I stepped forward.

"Do you see that?" I cried in Italian, thrusting Ghedina's stick almost into the man's face. "Do you see that, imbecile? Take us to Antonio."

The porter stared at the hammered silver head of the cane, and the knife dropped to his side. It would have been an easy matter for us to have rushed him then, in the first moment of his surprise; and David, I know, was sorely tempted. Luckily, he stood motionless; the stick was more powerful than our fists.

From the cane the man raised his eyes to me. "I do not know," he muttered stupidly. "I do not know."

"Of course you don't know. Who are you to know? Pig, are we to stand talking to you? Take us to Antonio."

I had heard Cagno talk too recently not to have caught something of his manner, and there was no ingratiating politeness in my speech. If abuse was the diet these men were accustomed to, my Italian vocabulary was extensive enough to give it to them.

My method was successful. With a rough growl of apology, the porter reached past Marshfield's grim face and grasped the ropes of the freight-elevator. "I never saw the *signore*," he muttered as the car started upward. "I had my orders."

The car stopped at the next landing, and he stepped out on the top floor of the warehouse. In tense excitement, Marshfield and I followed him, only to choke back our disappointment. There was nothing here. Under the sloping walls of the roof a few cases were revealed in the dim rays from a dirt-encrusted skylight above; in the wall, overlooking the yard, a wooden door closed a large opening which had been cut for the admission of such wares as did not come, as we had, by the elevator.

A few paces along the floor our guide stopped to whistle shrilly. In the shadows beyond him we heard a door open, and the figure of a man advanced toward us. He exchanged a word or two in an undertone with the porter, and then the two of them turned back to where we stood by the elevator.

"Antonio, *signore*," was the brief introduction.

The newcomer peered at us under

heavy brows, a squarely built, stocky figure of a man whose strength lost nothing by being only indistinctly suggested in the scanty light. We studied each other for a second before I spoke in cold command:

"You are to ship the goods at once by the rear way. We will go with them."

"Who are you, *signore?*" The man's tone was respectful, but as firm as mine.

"That is nothing to you. You see this." I raised the wizard's wand I had won from Ghedina.

"*Si, signore,* but the orders were to come from Signor Cagno."

"There are others higher than Signor Cagno. We have changed our minds. Come, you have your orders—"

With Marshfield by my side, I stepped with an assurance that it was difficult to feel, past the man and down toward the door from which he had emerged. My back was cold in anticipation of the knife-thrust I more than half-expected, but it did not come; only a few hurried, whispered sentences, and then:

"It is right. There was no warning from the office, and I was told to be ready."

Antonio slipped past us to fling open a door in our path as the elevator creaked its way down to the bottom floor. Before us was a small room furnished with a range, some kitchen utensils, and a cot-bed. Another door led from it, and at this Antonio paused.

"Will the *signore* see him, or shall I prepare him to leave?" he asked.

"We will see him." And without further ado, I pushed open the door Antonio unlocked and walked in.

It was the prison of Pietro Bigontina. No second glance was needed to tell us that we had reached our goal at last. The slender boy of eighteen who turned from the window at our entrance to face us with dark eyes gleaming from a pale and suffering face, was Maria's brother. There were the same clear-cut features, the same sensitive mouth, the same rounded chin, only— Well, what is delicacy in a girl may be weakness in a boy, and Pietro Bigontina, unaided, was hardly the man to fight his way clear of such enemies as his.

There was a frightened defiance in his eyes as he faced us that went to our hearts, but neither David nor I dared to reassure him. We must play our parts a minute or two longer; if we played them well, we could afford to indulge in sympathy hereafter.

"You must come with us," I ordered, "and at once."

"I will not!" The boy's voice was shrill with hate and helplessness. "I will not."

"Eh!" It was more like the growl of a bulldog than the mild voice of David Marshfield, and involuntarily I jumped as I heard it. Justly doubtful of his Italian, David had refrained from speech after his unsatisfactory interview in English with the porter in the elevator. Now, with the wonderful perception that was like a sixth sense with him, he took from my shoulders the burden of bullying the brother of the girl I loved.

"Eh!" The word might have been Italian or English or ancient Sanskrit. Flung at him with all the browbreating violence that had made the elder Marshfield wealthy, it came to the wretched Pietro like the signal of his doom. The captive wilted as the clerk had wilted; what was more important, the last trace of suspicion vanished from the jailer's brutal face as he watched. But Marshfield was, after all, only a dumb terror and I was forced to the front again.

"The rear way, Antonio—show it to us."

"*Si, signore,* but do you care for this?" He stepped back into the kitchen to emerge in a second with a small bottle and a napkin. "It keeps them quiet," he remarked with an evil grin.

It might; certainly the sight of it did not. A cry broke from the boy's lips, and he leaped into the corner of the little room, as far as he could get from the abomination. Sick with the knowledge of what it all meant, unnerved by the horror of that scream, I yet had presence of mind enough to turn upon him with an oath:

"None of that. Silence! Put that down, Antonio; he will come quietly without it. Show us the way."

As docile now as though I had been Rocca himself, the ruffian restored the drug to its resting-place, taking up, instead, a slouch-hat. This he jammed on the boy's head, pulling it low over the twitching face. Then we were ready to leave the den of iniquity.

The rear way, it appeared, was a spiral iron staircase, winding down through the gloom of the warehouse, and closed on the top floor by an iron door, which Antonio unlocked with one of a bundle of keys he drew from his pocket. I had already begun the descent, and Marshfield was pushing Pietro after me, when a sudden noise checked us abruptly.

It was the warning whistle which had produced Antonio for our benefit a minute or two before. Through the echoes which broke the dusty silence of the isolated floor we heard the creaking of the elevator close at hand.

David reached out a powerful hand and grasped the jailer by the wrist that held the keys. "Come," he ordered in gruff Italian, and pointed down the winding stair. Antonio's feet braced like the legs of a stubborn donkey as he stood in the little doorway, his head turned to listen.

In the stillness there rang out the shrill voice of Ghedina: "Care, Antonio; care!"

Marshfield's hand was already upon the Italian's wrist. At the first word he bent it viciously backward, and a howl of pain mingled with the last of Ghedina's warning cry. A twist of his foot and a thrust of his arm completed the work, and I heard him shout:

"Run for it, Steve!"

The slight weight of Pietro fell against me as Marshfield shoved him down the stairs, and then I ran. Behind me I heard the panting of our rescued prisoner, the heavy steps of my friend, and a chaos of shouts and curses. The stairs seemed interminable as I leaped on through the gloom till my head was dizzy with the sharp turning and the dark world swimming about me.

I came to the bottom at last—and the bottom was a locked door. For a moment I beat upon it with my naked hands, the hot breath of Pietro upon my neck; then I was thrust aside, and David's voice, hoarse with his running, came to me:

"Where the deuce is the thing? Ah!"

A flood of sunlight burst upon us as he flung open the door. Scarcely ten feet away, waiting in a narrow alley, was a closed carriage, and behind us, as I glanced back, I saw the shadow of the foremost of our pursuers.

With a cry, Pietro sprang out into the daylight. David's hand closed upon his collar in a second, but I saw no more. Jerking the keys from the lock into which Marshfield had thrust them, I slammed the solid door in the face of the ruffian who was almost on me, held it with my weight for a second, and heard the bolt snap into place as I turned the key on the outside.

"West Eleventh Street," I ordered, and the words reached the driver above the thud of men throwing themselves against the locked door. "West Eleventh Street," I cried again, for the coachman was motionless in surprise. "Can't you see there is no time to waste?"

Apparently he saw, for the door had not yet closed after me when the carriage dashed out of the alley and was speeding northward. Marshfield's hands left the boy and rose to mop the perspiration from his streaming face.

"Infernally lucky I got those keys," he panted. "How about it, Bigontina? You understand English, eh?"

Pietro's big eyes fastened themselves on the face of his new captor.

"A little," he gasped. "You are not one of them."

"Not by a darned sight!" David's laugh of sheer triumph seemed to blow from us the last clouds of danger. "You tell him about it, Steve. It's your turn now. I told you the sentiment would come after the fighting."

He was wrong there. To my first hurried sentences of explanation the boy listened in vague bewilderment, but to no more. "She is safe; I am free," he repeated over and over in absolute exhaustion until, out of pity, I desisted. He was free, but, as we were soon to learn, Maria was not safe.

(To be continued.)

The Railroad Man's Brain Teasers.

Here Are Three Hard Nuts to Crack During the Cold Winter Nights, Boys, and, Perhaps, You Can Send Us Some That Are Equally as Good.

WHEN we closed the puzzle department some months ago we feared that the puzzle ground was pretty well worked over. We are still waiting to find out whether this is true or not, and hoping it is not. In the meantime, we are indebted to Mr. A. K. Sedson, of North Pomfret, Vermont, for the two that follow:

(1) When in action, which moves fastest, the top or the bottom of a locomotive's drive-wheels?

(2) Two trains of equal tonnage and an equal capacity for starting eighty loaded cars, and not one pound more, are connected, tender to tender, by means of a link capable of sustaining the strain of starting eighty cars, and not one pound more. The engines are started at full capacity in opposite directions. Will the link stand the strain?

Of a similar nature to the first of these puzzles is one forwarded by Mr. H. F. Brown, of Chattanooga, Tennessee:

Given a spot in the rim of a five-foot driving-wheel touching the rail at each revolution, how far will the spot travel while the locomotive is traveling one hundred miles?

We await solutions from our mathematically inclined readers.

ON THE EDITORIAL CARPET.

Well, Here's Looking at You, Boys! And Wishing You a Merry Christmas and a Happy New Year!

A HAPPY NEW YEAR.

NEXT month is the time of resolutions, new leaves, and good intentions. It is the time when we send our consciences to the shop for an overhauling—and usually we find that they have been drawing a load twice as high as their rating, that the cylinders need packing, that the tubes are leaking, that the bell is cracked, the headlight smoky, and the drawbar so confoundedly strained that nothing but a New Year has saved us from being ditched on a down grade.

And then the remarkable thing is the comfortable amount of credit we take to ourselves for sending this leaky old teakettle of a conscience to be jacked up and repaired.

Just because it hasn't actually blown up or smashed a side-rod and sent us under a tombstone, we patronize it like a poor relation, and think how good we are to take a look at it at all.

It will, of course, be clearly understood that we are not now speaking of the editorial conscience. That is the one infatlible, well-oiled, high-pressure piece of machinery that always behaves itself because it is constantly attended to.

When we don't attend to it ourselves our readers do it for us, and when our readers set the sand running you bet the editorial conscience gets such a grip on the rails that it's a wonder the track doesn't curl up behind us.

For us, New Year comes every month, and we believe that the good intentions announced monthly in this department are usually lived up to, judging from the letters we get from our friends.

The headline of this item has probably led you to believe that we are going to wish you a Happy New Year, so, having got off our little reminder of good resolutions and consciences, we will proceed not only to wish for you, but promise to do our best to insure for you, A HAPPY NEW YEAR.

We could, if we would, tell you of many good things for the New Year, but we like to be conservative in our promises and liberal in our gifts.

Still, we would just like to assure you that there isn't going to be any need for a pusher on even the steepest grade. We are going to climb them all at the same speed we have kept up from the first.

We've got a tender full of anthracite and water, and we are not on any short allowance of oil, so we don't hesitate to say that we can give you as smooth a run as you can desire.

True, we very rarely use the brake, but we are always under control, nevertheless, and the reason we never set the brakes is that we have a clear track and no crossings.

Perhaps it strikes you that we are a little early with our New Year wishes, as we have not yet wished you a Merry Christmas.

Right in front of this are 186 pages, wishing you that in every line, and following it are 2,204 pages that are waiting around the corner to carry out the sentiment that heads this item.

Take, for instance, the January number, which led us to think of the New Year. In that number "The Spider of Palermo" draws to a thrilling climax, which should not be missed by any reader.

We don't remember that we ever had a story that made a better finish at the end of a long run than this one. She's just as strong and fresh, hot at the boiler and cool at the bearings as she has been throughout, and it seems a shame to send her to the roundhouse.

Mr. Stone's heroes and heroine in "The Daughter of the Idol" continue to have a strenuous time of it, while "The Treasure of the World" and "The Dam-Builders" have absolutely no high joints and low centers.

In the way of short stories, we have a screamingly funny yarn by our new friend E. Florence, who has delighted us with his pleasing impossibilities in the November number and in the present issue. It is entitled, "What Did Dugan Do to Him?" A story called "The Disappearing Diamonds"

will also catch your funny streak, as will "The Telegraphic Twins." Then there is another yarn which is as funny as a fireman in a uniform. It is by a new writer, F. H. Richardson.

Other stories of a more serious nature will be along to keep the risible journals cool, and they are just as valuable to us in helping us push our pilot over the ties at full speed.

In the line of specials we have a true story about a race with the Sunset Limited. If we are not mistaken you will feel the throttle lever in the palm of one hand and the brake lever in the palm of the other, and you'll see the ties skipping underneath you and being swallowed by the train all the time you are reading this story.

Mr. Herr will continue to tell of his experiences while "Being a Boomer Brakeman," and Mr. Smith and Mr. Willets need neither introduction nor explanation here.

Another hummer we shall probably run is a true story of how a flyer made up lost time. We should like to tell you more about this story, but after thinking of "The Race with the Sunset Limited," we are dizzy, and dare not risk our editorial dignity by taking them both together.

Altogether we have done our level best to give you a bright fire and a clear track on the run for A HAPPY NEW YEAR.

The 1910 is ready to take the main line.

TWO NEW POETS.

WITH more than usual pride we introduce to our readers, through this month's Carpet, two new poets—singers of the rail who know whereof they sing. None of your hifalutin Kiplingese, but just the plain, simple song of the man who has lived the part. The first is James A. Crowell, Atlanta, Georgia. His verse is dedicated to the knight of the key, whom we all familiarly know as a "ham."

OH, YOU HAM!

Out in a lonely office,
Before the break of day,
A ham lay snoozing gently,
A getting good old hay;
He lay upon the table,
As just as good as dead,
For he never heard a single word
The clicking sounders said.

Chorus.

He was in a better land—
A land all clear and bright,
And there he had a day job,
For they didn't have no night;
Only one train ran a day,
His pay was but a gift,
For this here solitary train
Ran on the other shift.

The despatcher he was swearing—
As all despatchers do—
For Number Nine was waiting
For the block to go on through.
The ham he kept on snoring,
His job he couldn't shirk—
For he was in that sunny land
Where he didn't have to work.

Chorus.

Hark! Number Nine is whistling!
She wants to go on by!
She has ten cars of perishable
And fourteen cars of rye.
The ham awoke and looked around,
And spied the waiting train,
Just then he heard the sounder:
"You are discharged again."

Chorus.

THE second poet is Roy L. Nichols, of the Oregon Railroad and Navigation Company. His, like Mr. Crowell's, was evidently inspired by that *wanderlust* classic, "The Dying Hobo." Mr. Nichols modestly informs us that this is his first and last effort as a fall poet, but that he may write another next spring. We like to encourage genius when it swings onto our right-of-way, and if any poems by Mr. Nichols comes our way next grass, we will certainly put the arm against them. Here is Mr. Nichols's poem:

TWENTY YEARS AGO.

Beside a Western water-tank,
One cold November day,
Outside an empty pigpen-car,
A drunken hobo lay;
No pardner stood beside him,
But he heard a warrant read,
And listening to all the words,
The drunken hobo said:

"Marshal, please go and let me sleep,
For I'm now feeling right;
I have been trying for so long,
And now I'm good and tight.
Tell your chief and policemen many,
When they meet to 'look around,'
That you found me 'on the level'—
I was lying on the ground.

"I want to dream of sweethearts many—
And one whose face no more I'll view,
For I left her out in Denver,
And I'm glad that I came through;
I know she'll not weep for me,
Nor sob with drooping head,
For I was aye a truant bird
While by others she was fed.

"I used to call her sweetheart,
She was such a buxom kid,
She had eyes just like a Sappho,
And she'd never bat a lid:

Her form was sylphlike—ways confiding,
Face like artists love to paint—
Just one more drink, bartender,
For I think I'm going to faint.

"Ah! the memory of that female,
With her face so good and true;
What, you think that I am nutty
That I made the grand skidoo?
Well, you see, pard, it was this way—
I haven't always been a bo,
All this happened back in Denver,
And 'twas twenty years ago."

FROM A REAL OLD-TIMER.

EDITOR THE RAILROAD MAN'S MAGAZINE:

I SEE by your Light of the Lantern Department that good, bad, and indifferent men are out for records. Good, bad, or indifferent, I think that I have a record myself. I have worked. I am sixty years of age and have worked on twenty-six different railroads, not counting four plantation roads. I began by braking on the Northern Central out of Baltimore in 1869. I am now roadmaster of the Ferrocarril Central Dominicano. I have had a varied experience.

During all this time and hard work, I have found time to marry and raise a family. Can any one beat it? I am one of the real old-time railroad men of the West, and have seen more ups and downs than usually fall to the lot of even a railroad man. Still, I find young men who have never seen anything but a ballast switch, who try to tell me what a railroad man's work is.

Sich is life.

I am a subscriber to THE RAILROAD MAN'S MAGAZINE since the first number, and I think that it is all to the good. No blind sidings about *it*.

While Mr. Willets was writing about the railroads of the Southwest, I could follow him right along, and I was a participant in some of the shindigs that he described.

Incidentally, if any one else writes and says that "Billy the Kid" was killed in Santa Fe, or that he flourished in 1887, they are in error. "Billy the Kid" was killed by Pat Garrett near Fort Sumner, New Mexico, in the year 1881. I was there.

Yours truly,
WILLIAM G. KING.
Roadmaster, F. C. D., Puerto Plata, Dominican Republic.

SAME TIME, BUT LESS EFFORT.

THE general manager of *The Coal Trade Journal*, Mr. Fred W. Saward, has sent us, with his compliments, several very interesting matters of railway importance for which he has our sincere thanks, and which we will be pleased to publish. In his letter to us he has the following to say regarding the Salt Lake project of the late E. H. Harriman. We believe it to be of special interest to all our readers because Mr. Saward is a man who knows whereof he writes:

The general idea of railroad improvements is the quickening of time, but it would appear that the Central Pacific reconstruction across Great Salt Lake had equally in mind the doing of the same amount of work as before, in the same time, but with less effort. For instance, a comparison of old and new time-tables will show that train No. 3 saves one hour and fifty-five minutes by crossing Great Salt Lake, but it only saves twelve minutes in the through run to San Francisco, showing that it loses one hour and forty-three minutes on the far end of the line.

Train No. 5 saves an hour by crossing the lake direct, but loses one hour and three minutes on the far end of the route, so that the net result is a loss of three minutes.

Train No. 1 has really been quickened to some extent. It gains two hours and fifteen minutes by crossing the lake, and also gains thirty-two minutes at the far end of the trip, so that the total saving is two hours and forty-seven minutes. If I am not mistaken, however, the connecting train leaves Chicago at the same time now as for many years past, 6 P.M., so that any saving west of Ogden is used up in the section east of Ogden.

In view of the discussion of Harriman methods from many standpoints, it seems to me that this phase of the matter may possess some interest to the practical men among your readers. By making the requirements of a certain task easier, a financial saving is secured, and thus the company is compensated for the heavy expenditure of such a work as the Great Salt Lake bridge and embankment underfaking.

OUR SILENT HEROES.

ROBERT H. ROGERS'S article, "Silent Heroes of the Rail," in our October number, created more than the usual amount of notice. We wish that we had the space to publish all the letters relating to it that have come to the Carpet. Whenever an article creates a controversy like unto the much-mooted question, "When to Jump?" or the Cook-Peary North Pole affair, we feel pretty good about it. It would be a sad old world if there weren't two sides to every question.

EDITOR THE RAILROAD MAN'S MAGAZINE:

Apropos of "Silent Heroes of the Rail." I for one give very little credit to a hero who would go out on a run when he knew

his mother was a corpse, and that the foreman had held the letter so notifying him two days.

What he should have done was to knock the foreman's block off for asking him to go, after delaying the letter as he did. By so doing he could have ascertained to a minute just exactly how long it would have taken them to get another fireman to fill his place, and how much the noble company appreciated him. I think he was afraid of losing his job.

As to the fireman who fired on the funeral train, he was a pin-head for standing in front of the leaky throttle, and his engineer was a bigger one for asking him to do so. Mr. Patrick Collins was as dead as he'd ever be; and had the packing all let go suddenly and cooked his eyes out, the company would have put him in the scrap, and if he'd had one eye left they would have given him a crossing job at about twenty per.

I am favorable to giving credit where due, but I am satisfied that very few railroad men approve of that type of heroism.

A HOGHEAD.

EDITOR THE RAILROAD MAN'S MAGAZINE:

AS I have been a reader of your magazine for something over a year, I feel safe in saying a word in its favor, and another reason is because I seldom see any correspondence from the Lone Star State.

In the October number, 1909, I notice a little talk by Mr. Robert H. Rogers, "Silent Heroes of the Rail."

Well, in my opinion (which doesn't count much) Mr. Rogers is not very well acquainted with hogheads. As a fireman, brakeman, and operator, I believe I can tell him a few strange tales.

He speaks of Engineer E. T. Parlett, who cut off a couple of fingers, threw them out of the cab-window, and kept "pounding them." Also, of Mr. Daniel Smith, who, with a broken arm, kept 'em "batting," which reminds me of an engineer who came limping into my office one night when I was doing the owl in Louisiana, and wanted to know where the engineer of a work-engine that was tied up on the passing track slept.

I gave him necessary directions and he limped out.

The tallow-pot, whom I knew very well, came in and told me the story.

They were rolling along at about thirty per, on an Extra North, when Mr. Engineer spies a switch-light on the curve, "big holes" her and unloads right in a cattle guard and lets the fireman take care of her. He had knocked the skin off himself in a place or two, also bunged his ankle up and wanted to get the engineer on the work-train to run his engine and let him rest in the little red dog-house behind.

There are some brave ones and some awful big cowards among the engineers.

I guess this is enough knocking, so will speak a good word. I think your magazine the best on the market, and am always glad to see it shown up on the news-stands. May it live long and continue to prosper. Let's hear some more from Spike Malone.

G. E. CAREY.

Silsbee, Texas.

FOUND IN A JUMPER.

TO H. W. Claiborne, South Bend, Indiana, we send sincere thanks for another old railroad epic, "The Night That Kearney Died," to which we gladly give space. Mr. Claiborne found it in the pocket of an old jumper of a relative who had been an engineer on the Texas and Pacific for fourteen years. Here goes:

THE NIGHT THAT KEARNEY DIED.

The wind was howling wildly
Through the hand-rails on the side,
And the fireman stoked in sileuce
On the night that Kearney died.

The headlight shone through whirling flakes,
On snow-banks deep and wide,
And the whistle's shriek was muffled
On the night that Kearney died.

We could see the snow acoming
As we went through Key's Divide,
But we couldn't see the broken rail
On the night that Kearney died.

Kearney drove old Number Eight—
The heaviest, and his pride—
But the broken rail it killed her
On the night that Kearney died.

Kearney threw his sand and air-brakes,
But her weight still made us slide,
So we uncoupled big old Number Eight—
On the night that Kearney died.

The coaches landed safely, but
Old Eight lay on her side;
She'd filled the gap and saved a wreck—
On the night that Kearney died.

They told his blood-relations,
And his newly married bride,
How he left us like a hero—
On the night that Kearney died.

"VERY ENGLISH" QUESTIONS.

WE have just received a very welcome letter from an English friend who signs himself "Very English." With it he encloses a newspaper clipping showing the splendid record of the English railroads in the matter of accidents to passengers during the year 1908. This record of no passengers killed fires his patriotic zeal, and when patriotic zeal is fired the usual result is an endeavor to make ashes of everybody else's patriotic pride.

We could not hope to give our readers an idea of how "Very English" this letter is, nor how hot and consuming is the patriotic zeal, without reproducing it word for word, so here it is. He begins by calling us "Gentlemen," a concession which we never claimed, but for which we are duly grateful. Then, after granting so much for the sake of argument, he gets after us.

What is the ratio per thousand of railroad travelers in the States who get killed or maimed by accident? I enclose a clipping on this subject about the English railroads, which speaks for itself. When freight has arrived at its destination do any of your railroads deliver it to consignees, at their store or house? In English we would say, "Do the railroads 'cart' their freight to the consignee"; you can turn this into American for yourself. Why do not your trains whistle when leaving a station or depot? In England, when a train is due to leave a station, the "guard" first looks at his watch, then compares it with the station clock. Next he waves a flag, by day, or a lantern by night, to the driver; then the driver whistles to the guard, who is busy slamming the open doors of the carriages, and finally dives into his "van" as it passes. In England the starting of a train is a serious performance, and should you be in the vacinity (?) you could not help but know that it *has* started. Why RAILROAD MAN'S MAGAZINE? Should it be "Man's" or "Mans'?"

Yours, etc.,
"VERY ENGLISH."

The date is 12-9-09! Why should you put it 9-12-09?

We fear that "Very English" is not seeking information. We fear that his notes of interrogation, as well as his notes of exclamation really represent that sound which caused Peter to go out and weep bitterly. In short, we fear he is crowing over us.

But who could be offended at such innocent crowing, in which boyish enthusiasm struggles nobly with some facts, nobly ignores other facts, and nobly mutilates others upon the altar of patriotism? Not we, in sooth!

In the first place we have an unbounded admiration for English railroads; or rather, as our friend Very fails to point out, "railways," an admiration which nearly twenty years' experience of them failed to extinguish. Their record is a thing we cannot be led into disputing, but, Very, if you will permit the affectionate abbreviation, is there not some difference between 26,000 miles of railroad and 130,000 miles of railroad?

Of course we have not the passenger congestion to deal with that the English railways have, but neither have they the difficulty of laying perfect roadbeds, with perfect signal devices over thousands of miles of practically unpopulated, non-revenue-producing country, some of which was not even explored until the railroad surveyor pushed his way through its sealed silences. Neither have the English railways the difficult problem of maintaining discipline and obedience to rules through an army of over 1,500,000 men scattered over an area of over 3,000,000 square miles.

"In English we would say, 'Do the railroads cart their freight?'" Very, this is awful, really! You know you wouldn't say any such thing. You would say, "Do the rail*ways* cart their *goods?*" No, Very, they do not. In the first place we have excellent and cheap express service, and, in the second place, as our freight-rates are little over half, and in some cases one-third those of our British brothers, we feel that this system of collection and delivery is a form of extortion which our railroads have done nobly to resist.

The chief reason that our trains do not whistle when they leave a station is that they ring a bell instead, as Very would doubtless know if he had ever been in an American station long enough to take a good look around. It may not be as positive, but anybody who has stood by an English locomotive, thinking dreamily of better days to come, and has been brought back to the present by the announcement, per siren, that the engine was about to start, will agree with us that the bell is easier on the nerves. Frankly, Very, we do not admire your whistles.

The elaborate method of keeping an English train-crew awake long enough for the train to get out of the station is excellent. We have often made special trips to the station to watch it, and we are fully convinced, not only that it is an effective method, but that it is the only effective method. We have watched, with palpitating heart, the guard make that "dive" into the van, and, honestly, it is the most wonderful and thrilling thing we know.

The guard is always very stout, he is always extremely flat-footed, and extremely knock-kneed. We do not mention these facts in disparagement, but merely to accentuate the glory of his feat. It is spectacular. Truly, if by nothing else, "you could not help but know that the train *has* started."

"Why," asks Very, "Why RAILROAD MAN'S MAGAZINE? Should it be Man's or Mans'?" Very, we fear you are hopeless, and we are sorry to say it, because we like you. We had previously noticed in your letter the curious indifference which all Englishmen seem to feel toward the Eng-

lish language, but we fear that under a question like this you should have signed "Very Bad English."

Let us explain. "Man" is a singular noun, the plural of which is "Men," not "Mans." A noun not ending in "s," in the possessive case is indicated by an apostrophe and an "s," not by an "s," and an apostrophe.

As for "Why 9-12-09?", Very, we do not know. We are afraid that question is not our gage, so it will have to stand on the blind siding along with the historic question, "Why eat ice-cream with a fork?"

OUR REGRETS TO CANADA.

UNWITTINGLY we ruffled the feelings of "Canadian" by allowing an apparently slighting remark on Canadian money in Mr. Koach's article on "Fighting the Ticket Scalpers" in the October number. In coupling Canadian money with Mexican and Confederate money we beg to assure "Canadian" that no slight was intended.

We merely had in mind the inconvenience of changing it into United States currency in towns not on the border, and the small fee charged by the banks for making the exchange. We would not for a moment cast a slight on the financial responsibility of any part of that wonderful empire whose chief jewel is our northern neighbor and friend.

THE PAY OF ENGINEERS.

EDITOR THE RAILROAD MAN'S MAGAZINE:

I am an interested reader of your magazine, and notice you are constantly being questioned as to the rate of wages paid engineers in this country.

In your answer to G. D., Montreal, Quebec, that the highest pay you know of any engineer receiving was $179.45, I wish to state that when business is good freight men in chain-gang service make $200 and over a month.

We have a five-car passenger run that leaves Rincon, New Mexico, at 7.20 A.M., arrives in Silver City at 12.15 P.M.; and leaves Silver City at 4.30 P.M., arriving in Rincon at 8.55 P.M. The man on this run is home every night and draws $255 for a thirty-day month if he works every trip.

There are three crews on the Belen cut-off, between Albuquerque and Clovis, New Mexico, and each engineer draws $220 a month and only works twenty days, so they have every third day at home.

At the rate of $4.80 and $5.10 per hundred, with divisions 151 miles long and very little local work, it does not take long to make a good check.

Thanking you for the many delightful hours I have spent reading your magazine and the information I have received from it, and trusting I may some time be of service to you, I remain,

SANTA FE LOCOMOTIVE ENGINEER.

OUR SONGS AND SINGERS.

SO far we have received only one answer to our request for the song, "My Jolly Railroad Boy," and that is not a very full one. One verse of the song is sent to us by M. F. S., Taunton, Mass. It reads:

Now I am going to praise my love;
I'll do it if I can,
He has as nice a well-shaped foot
As any other man.
He has two red and rosy cheeks,
And two black rolling eyes;
And for his sake my life I'd take;
My jolly railroad boy.

An enthusiastic reader in Atlanta, Georgia, writes us:

Please allow me room in your valuable book to say that ever since I picked up one of your magazines I have not been without a copy. I am not a regular subscriber, but I am a constant reader. I have started a scrap-book and want to get all the poems and songs that I can, so if you can help me, I certainly will appreciate it. Here's hoping that your magazine will run forever, and that it will finally turn into a weekly.

C. M. P.

Much obliged C. M. P. We would like to give our readers the pleasure of reading the magazine every week, but, we imagine that a hundred and ninety-two pages weekly has more attractions for the readers than the prospect of making it would have for the editors. As for the songs, we hope you will be able to get as many as you want.

WE ARE CARPETED.

WE have just received a little call-down which we admit is well merited. We allowed a reference to Chief Counsel Dickson, of the Brotherhood of Locomotive Engineers and Firemen to read "Brotherhood of Railroad Trainmen." We apologize to the engineers and firemen for inadvertently robbing them of the honor of possessing as chief counsel this remarkable man.

We are indebted for the correction to Brother A. J. Buffinton, Mechanicville, New York. Mr. Buffinton says:

I can't stand by and see the trainmen get away with anything like this. The order in general feels too proud of him. It is all O. K. except for the name of the order, and I want to tell you there is a lot more due him. He is a wonder.

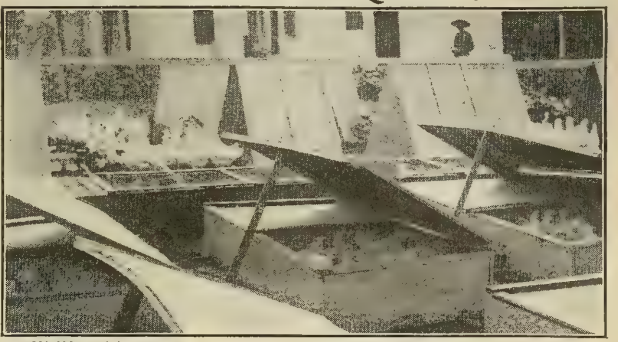
A LIVING FROM POULTRY

$1,500.00 FROM 60 HENS IN TEN MONTHS ON A CITY LOT 40 FEET SQUARE.

TO the average poultryman that would seem impossible and when we tell you that we have actually done a $1,500 poultry business with 60 hens on a corner in the city garden 40 feet wide by 40 feet long we are simply stating facts. It would not be possible to get such returns by any one of the systems of poultry keeping recommended and practiced by the American people, still it is an easy matter when the new

PHILO SYSTEM

is adopted.



THE PHILO SYSTEM IS UNLIKE ALL OTHER WAYS OF KEEPING POULTRY,

and in many respects just the reverse, accomplishing things in poultry work that have always been considered impossible, and getting unheard-of results that are hard to believe without seeing.

THE NEW SYSTEM COVERS ALL BRANCHES OF THE WORK NECESSARY FOR SUCCESS

from selecting the breeders to marketing the product. It tells how to get eggs that will hatch, how to hatch nearly every egg and how to raise nearly all the chicks hatched. It gives complete plans in detail how to make everything necessary to run the business and at less than half the cost required to handle the poultry business in any other manner.

TWO POUND BROILERS IN EIGHT WEEKS

are raised in a space of less than a square foot to the broiler without any loss, and the broilers are of the very best quality, bringing here three cents per pound above the highest market price.

OUR SIX-MONTHS-OLD PULLETS ARE LAYING AT THE RATE OF 24 EGGS EACH PER MONTH

in a space of two square feet for each bird. No green cut bone of any description is fed, and the food used is inexpensive as compared with food others are using.

Our new book, the PHILO SYSTEM OF POULTRY KEEPING, gives full particulars regarding these wonderful discoveries, with simple, easy-to-understand directions that are right to the point, and 15 pages of illustrations showing all branches of the work from start to finish.

DON'T LET THE CHICKS DIE IN THE SHELL.

One of our secrets of success is to save all the chickens that are fully developed at hatching time, whether they can crack the shell or not. It is a simple trick and believed to be the secret of the ancient Egyptians and Chinese which enabled them to sell the chicks at 10 cents a dozen.

CHICKEN FEED AT 15 CENTS A BUSHEL.

Our book tells how to make the best green food with but little trouble and have a good supply, any day in the year, winter or summer. It is just as impossible to get a large egg yield without green food as it is to keep a cow without hay or fodder.

OUR NEW BROODER SAVES 2 CENTS ON EACH CHICKEN.

No lamp required. No danger of chilling, overheating or burning up the chickens as with brooders using lamps or any kind of fire. They also keep all the lice off the chickens automatically or kill any that may be on them when placed in the brooder. Our book gives full plans and the right to make and use them. One can easily be made in an hour at a cost of 25 TO 50 CENTS.

TESTIMONIALS.

Bellefontaine, Ohio, June 7, 1909.

Mr. E. R. Philo, Elmira, N. Y.

Dear Sir:—I just want to tell you of the success I have had with the Philo system. In January, 1909, I purchased one of your Philo System books and I commenced to hatch chickens. On the third day of February, 1909, I succeeded in hatching ten chicks. I put them in one of your fireless brooders and we had zero weather. We succeeded in bringing through nine; one got killed by accident. On June 1, one of the pullets laid her first egg, and the most remarkable thing is she has laid every day since up to the present time.

Yours truly,
R. S. LaRue.

205 S. Clinton St., Baltimore, Md., May 28, 1909.

E. R. Philo, Publisher, Elmira, N. Y.

Dear Sir:—I have embarked in the poultry business on a small scale (Philo System) and am having the best of success so far, sixty-eight per cent of eggs hatched by hens, all chicks alive and healthy at this writing; they are now three weeks old. Mr. Philo is a public benefactor, and I don't believe his System can be improved upon, and so I am now looking for more yard room, having but 15x30 where I am now.

Yours truly,
C. H. Leach.

THREE POUND ROASTERS TEN WEEKS OLD

South Britain, Conn., April 14, 1909.

Mr. E. R. Philo, Elmira, N. Y.

Dear Sir:—I have followed your system as close as I could; the result is a complete success. If there can be any improvement on nature, your brooder is it. The first experience I had with your System was last December. I hatched 17 chicks under two hens, put them as soon as hatched in one of your brooders out of doors and at the age of three months I sold them at 35c a pound. They then averaged 2 1-2 lbs. each, and the man I sold them to said they were the finest he ever saw, and he wants all I can spare this season.

Yours truly A. E. Nelson.

Osakis, Minn., June 7, 1909.

Mr. E. R. Philo, Elmira, N. Y.

Dear Sir:—You certainly have the greatest system the world has ever known. I have had experience with poultry, but I know you have the system that brings the real profits.

Yours
Jesse Underwood.

Brockport, N. Y., Sept. 12, 1908.

Mr. E. W. Philo, Elmira, N. Y.

Dear Sir:—I have had perfect success brooding chickens your way. I think your method will raise stronger, healthier chicks than the old way of using lamps and besides it saves so much work and risk.

Yours respectfully,
M. S. Gooding.

Send $1.00 direct to the publisher and a copy of the latest revised edition of the book will be sent you by return mail.

E. R. PHILO, PUBLISHER, 348 THIRD ST., ELMIRA, N.Y.

What Position

Is there some position "higher up" that you have your eyes on, but which requires ***special training*** to secure and ***hold?*** Is there some line of work that appeals to you more strongly than the one in which you are now engaged, but which calls for ***expert knowledge?***

Summed up—***is lack of training keeping you back?*** If so, the International Correspondence Schools have a way by which you can advance—a way that is within your means—that doesn't rob you of your working time—that doesn't necessitate your leaving home—that doesn't mean giving up the little pleasures of life—***and that doesn't require you to buy a single book.***

Mark the attached coupon and learn ***how the I. C. S. can advance you.*** Marking it costs you nothing and yet brings you information and advice that ***will help you shape your career***—information and advice that you cannot get elsewhere at any price?

Men Who Have Won

With the help of your Course in Chemistry, I was able to gain a sufficient knowledge of Sugar Chemistry while working as electrician, afterwards getting a position of Assistant Chemist, and have now advanced to the position of Assistant Chemical Superintendent in a Sugar House making 300,000 bags of sugar each crop.
HERBERT W. ANDEM,
Preston, Oriente, Cuba.

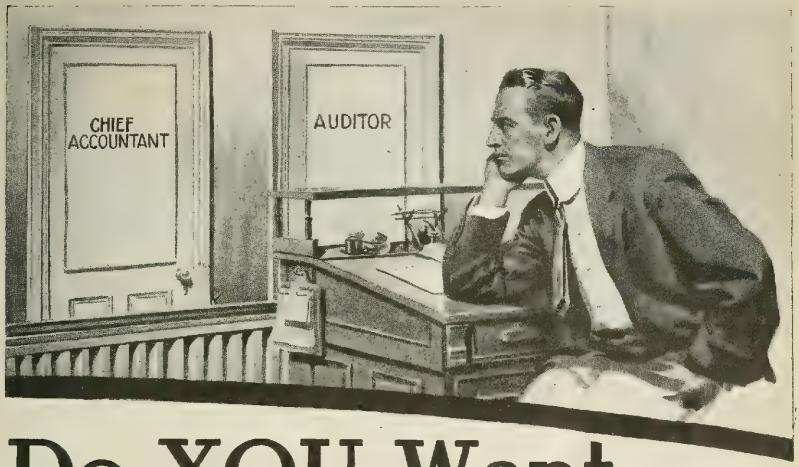
When enrolling in the I. C. S. I was engaged as a common laborer with no regular employment. Some time after enrolling I was offered a position as Fireman in the Union Utility Company, in which I am employed as 8th engineer, to which position I was promoted in six months. The Chief Engineer, 2nd Engineer and one of the two Foremen are I. C. S. students, and other I. C. S. students have gone from this plant to take up better jobs.
I can thank the I. C. S. for the advancement I have made and can heartily recommend it to anyone.
EUGENE C. BOWMAN, 33 Kingwood St., Morgantown, W. Va.

I took a Course with your Schools for about four months before taking an examination on May 11, 1908, and on Feb. 8, 1909, I commenced my work as Clerk to the Cashier of Customs with a salary of $1,000.00 a year.
I have a very pleasant position in contrast with my former position, which was a teacher in the Public Schools, with an increase of over 100 per cent in salary.
JOHN M. SNOOK,
Care of Custom House, Baltimore, Md.

A Course in the I. C. S. is well worth its study. I know the price of my Course has been returned to me many fold.
When I started this Course I was employed as wireman for the Pennsylvania Railroad Company, in Jersey City. In January, 1906, I was appointed Chief Electrician of Greenville Power Plant, with an additional $25.00 per month in pay. I am sure that it is only on account of I. C. S. training that I am able to fill this position satisfactorily. I am, therefore, glad I started to study and will recommend the Schools to any one.
J. P. APELDORN,
24 Garrison Ave., Jersey City, N. J.

I held the position of second-hand to overseer in a Cotton Mill when I first began with the International Correspondence Schools. I now hold the position of Superintendent in the Cotton Mills of The Courtenay Manufacturing Company.
The I. C. S. have been a great aid to me.
G. B. BYRD, Newry, Oconee Co., S. C.

At the beginning of my study for Architecture I was working as a Cow-Puncher, "Z-Y" Ranch. After receiving my diploma, I went into partnership with an Architect and was very successful, and later dissolved partnership and moved out here where I am running an office of my own.
I have good prospects ahead, and am already snowed under with work. It has increased my salary over 100 per cent since I enrolled with the I. C. S.
R. R. PAIGE, Blanca, Colorado.



Do YOU Want

Mark the coupon and learn how the I. C. S. can change you from a dissatisfied to a satisfied man—how it can fit you ***for your chosen occupation***—raise your salary—make you successful.

The I. C. S. can do all this. This is proved by the 300 letters received ***every month*** from students who VOLUNTARILY report better salaries and positions ***as the direct result of I. C. S. help.*** During August the number was 387.

Your advancement rests with YOU. The first step forward is the marking of the coupon. The I. C. S. method is adapted to meet ***your*** particular needs and means. Read the following testimonials and mark the coupon NOW.

Positions "Higher Up"

When I first took up your Course I was a Machine Shop Clerk at Montreal Cotton Company, Valleyfield, P. Q., Canada. After finishing, I obtained a position of Draftsman there, opportunely just vacant, stayed there 18 months and then a change of management caused me to leave. I obtained a position as Draftsman in the engineering Department at Howard & Bullough's, Cotton Machinery Makers, Pawtucket, R. I. I kept my position all through the late time of depression and I know I am giving satisfaction.
CHARLES EDW. FOSTER, Chamber St., Valley Falls, R. I.

Within a few months after enrolling I started making show-cards for merchants. The business increased so much that a day did not have enough hours for the work I had on hand. When I was 16 years I was making regular card writer's wages on every card I made, and during the last two years my income increased to double. If my business continues to increase as it has in the last two months, I will be clearing $100 a month by the end of the year.
J. KING FORREST, 905 E. Ruby St., Argentine, Kans.

I think the International Correspondence Schools is the greatest institution of its kind, and I would not hesitate to recommend any of its Courses of study to anyone who might be interested in the same. When I started to study through you I was earning $9.25 per week, and in less than three years was earning almost three times that amount, and I hope to make still more in the near future.
I would also like to state that on May 1, 1909, another Architect and myself will open an office in New York City.
E. E. SEDILLE, 239 First St., Newark, N. J.

"Better Position" Coupon

INTERNATIONAL CORRESPONDENCE SCHOOLS,
Box 1003 D, SCRANTON, PA.

Please explain, without further obligation on my part, how I can qualify for the position before which I have marked X.

General Foreman	Banking
R. R. Shop Foreman	Electrical Engineer
R. R. Traveling Eng.	Machine Designer
R. R. Trav'g Fireman	Electrician
Locomotive Engineer	Mining Engineer
Air-Brake Instructor	Mine Foreman
Air-Brake Inspector	Foreman Machinist
Air-Brake Repairman	Chemist
Mechanical Engineer	Assayer
Mechanical Draftsman	Architect
R. R. Construction Eng.	Bookkeeper
Surveyor	Stenographer
Civil Engineer	Ad Writer

Name _____

Employed by _____ R. R.

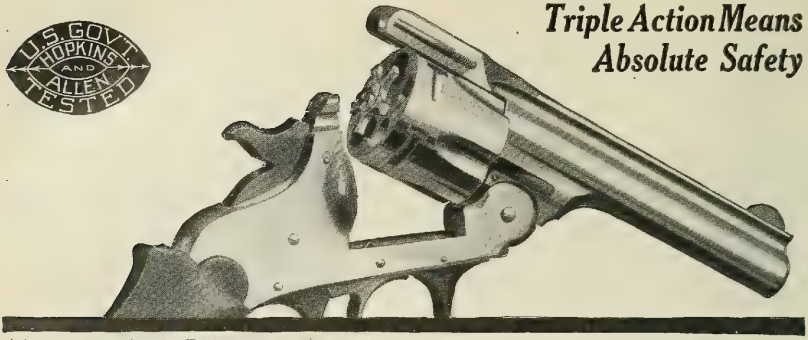
Employed as _____

Street and No. _____

City _____ State _____

U.S. GOVT. HOPKINS AND ALLEN TESTED

Triple Action Means Absolute Safety



Ask your dealer for the Triple Action Safety Police. 32 and 38 cal., 4 inch barrel, nickeled finish, with Walnut Army grip, $9.50; blued finish, $10.00. If your dealer doesn't have it we'll ship direct post-paid on receipt of price.

Send for our free 1909 Gun Guide and Catalog. This catalog also shows our other lines—the most complete range of high-grade, low-price firearms made anywhere in the world. Write for it. It's Free.

Have your dealer show you the

HOPKINS & ALLEN Triple Action Safety Police

The only time it shoots is when you want it to

The Triple Action is the *real* safety action. The first movement cocks the hammer, the second fires the shot, the third lifts the hammer completely out of the danger zone and lodges it against a wall of solid steel. There the hammer stays until you wish to fire.

The HOPKINS & ALLEN ARMS CO., 58 Chestnut St., NORWICH, CONN.

PAY NOW AND THEN

We will send for your approval a genuine ¼ **Karat, commercial white, perfect diamond,** in any style 14 karat solid gold mounting, **express prepaid, for $30—$5 down and $3 per month;** or a ⅜ **Karat diamond** of like quality for **$60; $10 down and $5 per month.**

If you are interested in a reliable watch, we offer a **gentleman's** O. F. 12, 16, or 18 size, or **lady's** 6 size, plain or engraved, **20-year guaranteed gold filled case,** fitted with genuine **Elgin** or **Waltham movement at $12.50; $3 down, $1.50 per month.** With hunting case **$16.75.**

Write today for free catalog No. L87. Remit first payment with order or have goods sent by prepaid express C. O. D. for your inspection.

Herbert L. Joseph & Co

Diamond Importers—Watch Jobbers

217-219 (187) State Street, Chicago

I am King, the Tailor

I tailor clothes to order, dealing directly with the consumer. You pay no middleman's profit. My custom-tailored suits cost you less than ordinary ready made clothes. I'll make a snappy, stylish, perfect-fitting suit or overcoat to your measure—a better looking, better wearing garment than you can possibly get from your local dealer or tailor—**and save you money besides.**

This Suit to $15 Your Measure

a suit that your tailor would ask $30 for. I make Suits and Overcoats to measure for $12.50 to $25.00 and **prepay the express.** My system of home measurement is so easy there is absolutely no chance for mistakes. **I take all the risks.** I actually make it easy for you to order stylish, tailor-made garments by mail at **less than ready-made prices.**

Style Book & Samples FREE

My Style Book contains samples of the newest weaves and designs for Fall and Winter, and also fashion plates showing the latest New York modes. It is **FREE**—send for it today.

For ten years, in the same location, I have made clothes for thousands of satisfied customers: **I'll satisfy you, or refund your money.** The Wisconsin National Bank of Milwaukee, with resources of over $20,000,000, and with whom I have been doing business for over ten years, will tell you I am responsible.

Let me be your tailor. Write for style book; it is **Free.**

King Tailoring Company

195 West Water Street, Milwaukee, Wisconsin.

STOP!

Stop Those Trust Methods!

It is up to **you,** Mr. Consumer. You, the buyer of the goods *must* insist on fair treatment and *honest values* if you expect to reap the *benefit* of the great national struggle against the trusts.

We have fought trust methods, the unfair contracts, and price-boosting methods of the giant watch factories, and now we have found the way by which you, the consumer, can secure anti-trust prices *for yourself.* We have decided to offer direct our finest and most superb watch, the genuine Burlington "Special." **While this offer lasts** you can get this watch direct, and at the identical price that the *wholesale* jeweler himself must pay.

Trust Prices Eclipsed

Yes, completely eclipsed on this great special offer. Now, *right now,* is your opportunity to secure the world's *masterpiece* of watch manufacture direct from us and at a simply *staggering* anti-trust price. We are *determined* to push our independent line. Hence our direct offer. Some trusts are legal and some are not. **We do *not* state that the watch trust is illegal,** but we do *know* that its price-boosting contracts and its methods are very, very unfair—unfair to you and unfair to us. So, in order to fight these methods most effectually we have decided to give our finest watch, the superb Burlington "Special" *direct* to the public on such an amazingly liberal offer that competition would be absolutely annihilated.

So Here is the Offer

We will ship *direct to you,* the genuine Burlington "Special," our very finest watch, and at the *same* price which the *wholesale* jeweler himself must pay. We do not ask you to risk any money at all—we will allow you to take your choice of either ladies' or men's size and will ship the watch to you **on approval,** *no money down,* for an absolutely free examination—returnable at *our* expense. We ship you the watch without any obligations at all so that you can see with your own eyes the overwhelming superiority of the Burlington "Special" watch over even the highest priced trust product on the market.

And at a price within the reach of all—our anti-trust direct price! Absolutely the ACTUAL wholesale price to everybody. The very finest watch it is possible to produce now within the reach of everybody.

Anti-Trust Watch Book FREE

Your name and address on the attached coupon or in a postal or letter will bring you a copy of our great Anti-Trust Watch Book by return mail, free. No one who wants a really good watch can afford to be without this book. All the details of our Anti-Trust fight, including our startling $1,000.00 challenge to our giant competitors is completely explained. Don't pay an enormous price for a first-class watch or be content with a "bargain" in a worthless timepiece. Send for our Anti-Trust Watch Book—drop us a postal or letter or merely send this coupon.

BURLINGTON WATCH COMPANY
Dept. 1109 19th & Marshall Blvd., CHICAGO

Notice to Friendly Dealers: *While we realize that many high-class jewelers do not favor the long-profit trust products, we can not at the prices now quoted direct allow any discount to either retailer or wholesaler. The jewelers should feel that our direct offer is not aimed at them, but against Trust methods, and that the direct offer is NECESSARY.*

BURLINGTON WATCH CO., DEPT. 1109, 19th & Marshall Blvd., CHICAGO, ILL.
Please send me without obligation, and prepaid, your free book on watches and copy of your $1,000.00 challenge to the giant factories with full explanation of your anti-trust offer on the Burlington Special.

Name.....

Address.....

USES A STUB OR ANY STEEL PEN

Sanford Fountain Pen $1.00

Everyone who uses a pen ought to know about the Sanford Fountain Pen, which uses any steel pen. Patented Feb. 25, 1908. A remarkable improvement in fountain pens. Office Men—Book-keepers—Shorthand Writers use and endorse it enthusiastically.

10 DAYS FREE TRIAL

"Don't Drop a Drop of Ink"

It is made of best hard rubber, in 3 styles, chased, plain barrel and shorthand size—Gives a smooth steady flow of ink—Positively will not leak or drop ink. Pens can be changed easily.

Pocket Clip 10c

The price of the Sanford Fountain Pen is $1.00—a pen of the highest quality at a very low price. We know that it is equal, if not superior, to any high-priced pen made. We are willing to prove this to you. **Mail us one of your favorite steel pens,** and we will send you a complete Sanford Fountain Pen postpaid. Try it 10 days—test it thoroughly. After 10 days trial, if you are satisfied, send us the regular price, $1.00—If not, return the pen to us.

The Best $1.00 Christmas Gift.

The Sanford Manifolding Pencil is a great convenience for users of indelible pencils. All parts hard rubber—dust proof—no stained fingers. Price 50c postpaid. Including set of indelible leads. AGENTS WANTED EVERYWHERE. Send for Booklet.

THE SANFORD PEN CO., Inc. 686 East 105th Street, Cleveland, Ohio, U. S. A.

WHITE VALLEY GEMS

No. 114 1Kt. Gem Solid Gold Tiffany, $10.00

No. 103 1Kt. Gem Solid Gold Belcher, $15.00

No. 103 1Kt. Gem Solid Gold Stud, $10.00

See Them Before Paying

These gems are Chemical White Sapphires and **can't** be **told** from diamonds except by an expert. So **hard** they **can't** be filed, so will wear **forever** and retain brilliancy. We want you to see these gems—we will pay all expenses for you to see them.

Our Proposition—We will send you either rings or stud illustrated—by express C. O. D. all charges **prepaid**—with privilege of examination. If you like it, pay the express man—if you don't, return it to him and it won't cost you a cent. Fair proposition, isn't it? All mounted in solid gold, diamond mountings. **Send for Booklet.**

WHITE VALLEY GEM CO.
P. O. BOX 4111 INDIANAPOLIS, IND.

Men's Clothing ON CREDIT

NO MONEY DOWN--$1 A WEEK

Buy Men's Stylish Fall and Winter Suits and Overcoats direct from our factory by mail, for

$15 and $18

¶ We require no security, and trust any honest person anywhere in the United States. We send garments on approval--you don't pay a penny till you get the clothes and find them satisfactory—then pay **$1.00 a week.** We are the largest Credit Clothiers in the world.

FREE Send to-day for our Fall and Winter samples, self-measurement blank, tape, and full particulars of our convenient payment plan, all free. Commer. rating, $1,000,000

MENTER & ROSENBLOOM CO.
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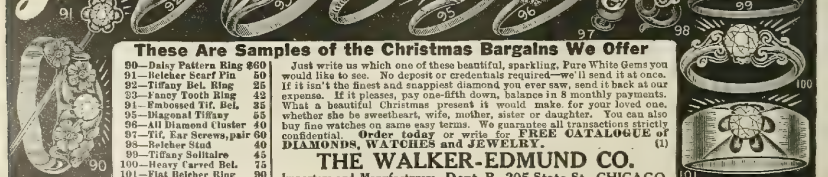
Diamonds ON CHARGE ACCOUNT AT CASH PRICES



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92—Tiffany Bel. Ring	25
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95—Diagonal Tiffany	55
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97—Tif. Ear Screws, pair	60
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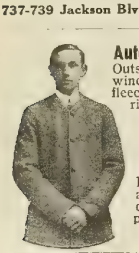

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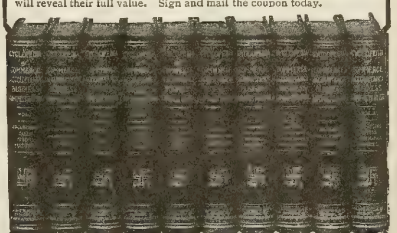

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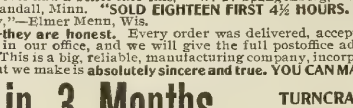

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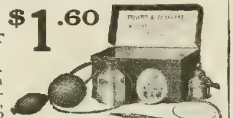

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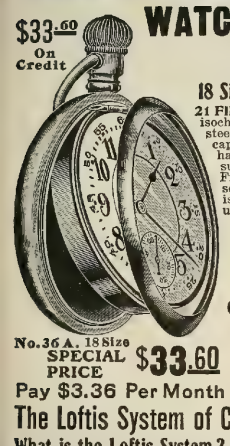

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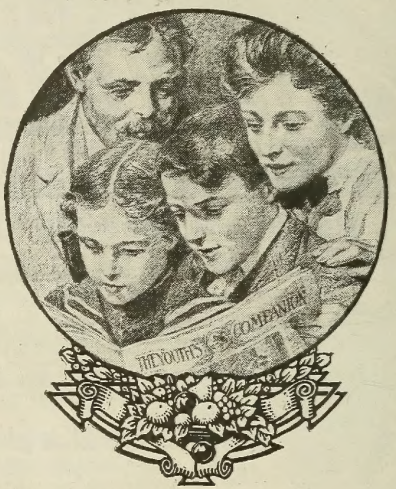

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